St. Louis City Ordinance 64882

FLOOR SUBSTITUTE
BOARD BILL NO. [99] 318
INTRODUCED BY ALDERMAN TERRY KENNEDY

An ordinance relating to cable television; approving a Staff Report entitled "Future Cable-Related Community Needs and Interests and Operator Qualifications in The City of St. Louis"; authorizing the issuance of a Request for Renewal Proposal to the incumbent cable television franchisee; with an emergency provision.

Whereas, the cable television franchises for the City of St. Louis expire April 18, 2000;

Whereas, Federal law regulates procedures to be followed in connection with the renewal of expiring cable television franchises;

Whereas, under applicable Federal law an assessment of the community's needs and interests with respect to a new cable franchise is required, as a basis for issuance of a request for a renewal proposal addressing such needs and interests to an incumbent operator; and

Whereas, the Communications Division has conducted such an assessment, and, based on that assessment, has prepared a Report entitled "Future Cable-Related Community Needs and Interests and Operator Qualifications in The City of St. Louis", and has prepared a Request for Renewal Proposal to St. Louis-TeleCommunications, Inc., the incumbent holder of the City's cable franchises, which the Board of Aldermen wishes to approve.

NOW THEREFORE, BE IT ORDAINED BY THE CITY OF ST. LOUIS AS FOLLOWS:

SECTION ONE. The Staff Report entitled "Future Cable-Related Community Needs an Interests and Operator Qualifications in The City of St. Louis", Exhibit A thereto, is hereby approved and adopted on behalf of the City of St. Louis.

SECTION TWO. The issuance of a "Request for Renewal Proposal" in substantially the form attached as Exhibit B hereto is hereby authorized.

SECTION THREE. Passage of this Ordinance being deemed necessary for the immediate preservation of the health and welfare of the residents of the City of St. Louis, it is hereby declared to be an emergency measure within the meaning of Sections 19 and 20 of Article IV of the Charter of the City of St. Louis and shall become effective immediately upon its passage and approval by the Mayor.

CITY OF ST. LOUIS

REQUEST FOR RENEWAL PROPOSAL

for

CABLE TELEVISION FRANCHISE

JANUARY 28, 2000

Issued by the Board of Aldermen of the City of St. Louis

APPLICANT'S RESPONSE TO THIS PROPOSAL MUST BE RECEIVED BY

10:00 a.m. ON July 5, 2000 AT

Communications Division
4971 Oakland Avenue
St. Louis, Missouri 63110
314-533-5802

ORIGINAL AND 7 COPIES TO BE SUBMITTED

30 COPIES OF EXECUTIVE SUMMARY TO BE SUBMITTED

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I. INTRODUCTION

A. INVITATION TO SUBMIT PROPOSALS With this Request for Renewal Proposals (RFRP), the City of St. Louis, Missouri (the "City"), invites St. Louis Tele-Communications, Inc. ("Applicant" or TCI) to submit a renewal proposal describing the cable-related facilities, equipment, and services that it proposes to provide in the City.

Section 624(b)(1) of the Cable Communications Policy Act of 1984, as amended by the Cable Television Consumer Protection and Competition Act of 1992, and the Telecommunications Act of 1996 (collectively, the "Cable Act"), 47 U.S.C. 544(b)(1), stipulates that franchising authorities can establish requirements for facilities and equipment in RFRPs as part of the formal renewal process established by federal law, where that process is applicable. It

is the operator's responsibility to provide those "facilities and services" that satisfy the cable-related needs and interests of the community, taking into account the costs. In evaluating the adequacy of a formal renewal proposal, the legislative history explains that the issue is whether "the equipment, facilities, and services proposed . . . are reasonable in light of the future cable-related community needs and interests, taking into account the cost of meeting such needs and interests." H. Rep. 934, 98th Cong. 2d. Sess. at 74, reprinted at 1984 U.S.C.C.A.N. 4655 (1984).

Even where the formal renewal process is applicable, TCI may, at any time, submit an informal renewal proposal to the City. The City can grant or deny an informal renewal proposal at any time, and for any reason, after providing the public with notice and an opportunity to comment. Nothing in this RFRP shall operate to waive any of the City's rights with respect to either formal or informal renewal.

The City has reviewed the past performance of TCI in light of franchise requirements, and has reviewed consumer satisfaction with cable service, completed technical inspections, solicited public input, held hearings, conducted studies and needs assessments, and taken other steps to identify future cable-related community needs and interests in the City.

The City has also reviewed the results of refranchising in other communities, including the characteristics of rebuilt or upgraded TCI and other cable operator systems in those communities.

Finally, the City is aware of the ongoing technological and other changes that can occur during the term of a typical cable television franchise.

The City therefore seeks proposals that

(1) describe, in detail, what services, facilities and equipment Applicant proposes to provide during a franchise term;

(2) demonstrate that Applicant's proposal will satisfy community cable related needs and interests capably, creatively, economically, responsibly and in a manner that will provide the benefits of cable communications technology to the residents, institutions, organizations, and businesses in the community;

(3) provide the benefits of cable communications technology to the residents, institutions, organizations, and businesses in the City for any franchise term; and

(4) show that Applicant is financially, technically, legally and otherwise qualified to hold a renewal cable franchise.

The proposal Applicant submits will be evaluated in accordance with the provisions of Ordinance 58462 ("1981 Cable Enabling Ordinance"), Ordinance 59197 (1984 "Cable Franchise Ordinance"), Ordinance 61093 (1989 "Cable Transfer Ordinance"), applicable federal law and any applicable public interest requirements, as indicated in section I.H below.

B. FRANCHISE AREAS ADDRESSED IN THIS REQUEST FOR RENEWAL PROPOSAL

This RFRP seeks a single proposal for both Area I and Area II. Each area was ordinally granted to two separate operators in 1984, and both areas were separately transferred to TCI in 1989. Both franchises have the same expiration date, and both are currently served by single cable system and headend. The City therefore has chosen to issue a single RFRP setting forth requirements which must be met City-wide. However, the City specifically reserves all its rights with respect to continuance of two separate franchise areas during a renewal term.

C. PROPOSALS BY OTHER PROSPECTIVE CABLE OPERATORS

The City is strongly committed to promoting vigorous competition in multichannel video programming distribution in order to maximize consumer choice, lower consumer costs, increase quality of service, and provide other benefits associated with a competitive marketplace. Thus, the City welcomes proposals by other prospective cable operators and encourages any interested parties to contact the City at the address on the cover page of this RFRP. Federal law, however, creates a unique set of requirements regarding proposals for renewal of a franchise, which apply only to an incumbent cable operator that has properly invoked its formal renewal rights. For that reason, this RFRP is addressed specifically to TCI and assumes that the applicant's system is already in operation in the City. Other prospective cable operators may, however, find this document useful as an indication of the City's standards for cable system franchising, as reflected within the specific context of the federal renewal rules. The City reserves the right to issue a general Request for Proposals addressed to prospective operators generally.

D. PRINCIPLES EMBODIED IN THE REQUEST FOR RENEWAL PROPOSAL

The following principles have been prominent in guiding the development of this RFRP:

1. The involvement of the users of the cable communications system in the cable franchising process is essential to develop a communications system that is responsive to the cable related needs and interests of the citizens of the City.

To that end, the City and its Communications Division reviewed its records compiled over the course of the franchise term for each franchise area, conducted studies, interviewed City residents to assess quality of service and identify possible uses of a cable system for community communications. The City completed research that identified public, educational, and governmental access needs in the City. Telephone Contact, Inc. was retained to conduct interviews with over 2,650 citizens. Engineering Consultant KramerFirm.Inc was retained to review technical features of the cable system. In addition, the City held three public hearings on telecommunications/cable issues in February and March, 1997 and two on cable franchise renewal in February 1999. All of the City's findings were evaluated in light of the state of the industry, and the experience of the City and other communities, to establish the requirements for equipment and facilities set forth in this RFRP. Reports and findings are included in the Past Performance Review and the Community Needs Assessment documents on which this RFRP is based. Applicant should show in detail how its proposal addresses all the needs and interests determined by the City in its needs assessment process.

2. A cable system should employ state-of-the-art technology so that optimal use is made of City rights of way and private property used by the cable system.

The City wishes to make effective use of the rights-of-way, and also wishes to minimize the need for repeated disruptions of the rights-of-way, such as might occur if the system utilizes technology that is relatively high-maintenance, or that requires substantial reconfiguration or reconstruction to respond to changing demands and market conditions. Thus, Applicant should propose a cable system that meets the existing cable-related needs of the community, and is capable of satisfying future needs and interests as they develop. In particular, Applicant's cable system should be flexibly designed so that, to the extent possible, it will be able readily to address future needs and interests that have not yet developed. Accordingly, the system should be designed so that an Applicant will be in a position to take advantage of new developments in cable communications technology that will benefit subscribers, as such technology becomes available during the term of any franchise. In determining whether the cable-related needs and interests of the community have been met by a

proposal, the City will consider the extent to which an Applicant has proposed a cable system design that is flexible + one that can be modified as may be necessary to meet future needs with a minimum of additional cost, difficulty, and disturbance to the public rights-of-way. Hence, for example, the City will consider whether the upgrade plan proposed creates barriers to future modifications to the cable system, by (a) increasing costs associated with bringing the system to the state-of-the-industry, or (b) limiting the system's technical capability to allow access by independent providers of non-video cable services .

3. A cable system should facilitate dissemination of a broad range of local information and viewpoints, and serve the programming needs of diverse communities.

All members of the public (including individuals, civic groups, non-profit organizations, and government and educational institutions) should have the opportunity to exercise their First Amendment rights using Applicant's cable system. The City therefore requires Applicant to describe its proposals for public, educational and governmental ("PEG") use in detail, and to explain how it would ensure that the access channels and resources promised will be managed in a way that ensures that the needs and interests of the community will be met. Moreover, to the extent that existing structures and arrangements for management and funding of access have worked well in the past, Applicant should explain in detail how its proposal will satisfy PEG users' future cable-related needs and interests if it proposes alternative methods of supporting PEG access operations.

4. High-quality cable service should be available throughout the City to anyone requesting service, on non discriminatory terms.

With the issuance of a cable franchise, Applicant is granted a special right to use the public rights-of-way which is not available to all. The City believes that any grant of a cable franchise can have a substantial effect on the quality of life in and attractiveness of the City , as well as upon other potential users of the rights-of-way. Therefore, the City has invoked its right to manage the uses of its rights-of-way to establish a firm and enforceable franchise agreement that adequately protects the public interest. Further, as older residential neighborhoods are redeveloped, and new residential areas (such as downtown) are established, it is essential that any cable system using the public-rights-of-way be extended to reach any and all buildings in which cable service is requested, at no charge to the subscriber for such construction and extension.

5. The promises made in any proposal should be enforceable from both a legal and a practical standpoint.

Therefore, in evaluating the adequacy of a proposal, the City will, for example, give little weight to promises that are phrased in a way that allows an Applicant to escape or avoid obligations. Similarly, Applicant should not seek to add to a superficially conforming proposal other features that would render it unworkable or cause it to fail to meet the City's needs and interests. For example, it would not suffice if TCI proposed to rebuild the system, but required the City government to provide funding for the rebuild. The City reserves the right to evaluate any proposal as a whole.

6. Developments and changes in cable technology should not create economic hardship for City residents of limited means.

TV is an important information and entertainment medium, especially to low and fixed income families for whom cable tv expenditures represent a significant portion of their monthly budget. Such residents would be hard-pressed to pay for a substantial increase in the price of current services, should the system be (a) switched to 100% digital delivery, or (b) require use of converters on cable-ready television sets, in order to continue receiving current Basic Tier and Expanded (CPS) Tier services. Therefore in evaluating the adequacy of a proposal, the City will take into account any Operator proposals to maintain or remove analog services or require use of converters by all subscribers during a franchise period.

E. FORMAT OF THE RFRP

This RFRP is intended to satisfy all requirements of the Cable Communications Policy Act of 1984, as amended by the Cable Television Consumer Protection and Competition Act of 1992 and the Telecommunications Act of 1996, 47 U.S.C. § 521 et seq., to the extent such requirements are applicable.

Sections I, II, III and IV of this RFRP require that Applicant's response to this RFRP propose a plan satisfying at least the fundamental needs and interests identified by the City in the Report of the City's Franchise Agency on Future Cable-Related Community Needs and Interest and the Past Performance Review of St. Louis Tele- Communications ("Agency / Staff Report"). Applicant is encouraged not only to meet but to exceed these requirements in order to ensure that the cable-related needs and interests of the community are satisfied. Sections I, II, III and IV also describe one possible configuration of a

cable system and various operational practices that would satisfy the City's minimum needs and interests. Section V includes application forms which Applicant is to use in submitting its proposals, and identifies materials and information the City requires an Applicant to provide in its response.

An application must be responsive to, and be submitted in the format required by, this RFRP and must include all required information. The City reserves the right: to reject a nonconforming application, or to require Applicant to provide supplemental information, or to require an amended proposal if the Applicant's filing does not conform to the requirements of this RFRP.

No proposal shall be considered submitted to the City until all information required by this RFRP has been provided, and the City has issued written notice that the filing is complete. The review period will not commence until the filing is complete.

F. FURTHER INFORMATION

1. Questions about the RFRP If an Applicant has questions concerning this RFRP, they should be submitted in writing no later than 10 business days prior to the proposal submission deadline, addressed to Larry D. Stone, Cable Communications Manager, City of St. Louis Communications Division, 4971 Oakland Avenue, St. Louis, Missouri 63110. All responses will be issued in writing. Applicant may not rely on questions asked and answered only in conversation or during the conduct of any informal negotiations under the Cable Act. However, an Applicant must submit a response to this RFRP by the deadline, regardless of whether the questions asked have been answered.

2. Definition of "Construction" for Purposes of this RFRP As used in this RFRP, the term "construction", or any derivation thereof, refers to construction of a new cable system, or a rebuild of an existing cable system.

G. SUBMISSION OF PROPOSAL AND ADDITIONAL INFORMATION

1. Applicant shall submit an original and required number of copies of its proposals to the Communications Division of the City of St. Louis on the date and at the place indicated on the cover of this RFRP, in accordance with the instructions set forth in this Introduction and in Section V.

2. Applicant shall provide an Executive Summary of its proposal, which shall not exceed fifteen pages (double-spaced). Applicant should provide also 30 copies of the Executive Summary to the Communications Division.

3. Applicant should provide one copy of its proposal and Executive Summary on a computer diskette, with documents in WordPerfect, QuattroPro, or Paradox formats as appropriate for word processing, spreadsheet, and database components.

4. Applicant's proposal shall be accompanied by a certified check equaling 1% of the previous 15 months franchise fee, made payable to City of St. Louis Fund 1117 in accordance with Twenty-eight.1 of the 1984 Cable Franchise Ordinance governing renewal. This application fee will be used by the City to offset direct administrative expenses incurred in evaluating and acting upon Applicant's proposal, including, but not limited to, staff time, consultant costs and duplication of materials. City reserves all rights to determine correctness of the fee amount.

5. Applicant must disclose to the City, in writing, the names, addresses and occupations of all persons authorized to represent or act on behalf of the Applicant in matters pertaining to its franchise application. This disclosure requirement shall remain in effect until Applicant's application is accepted or rejected, or until Applicant withdraws its application.

6. Applicant must also identify all persons holding a direct or indirect financial interest of one percent (1%) or more in Applicant.

7. Applicant will be expected to respond to any requests for additional information concerning the proposal fully and promptly, in accordance with the deadlines specified in such requests.

If the City preliminarily determines that a franchise should be granted, the terms of the proposal will be incorporated into a franchise agreement, for acceptance by Applicant and the City, as discussed below.

H. EVALUATION OF PROPOSALS

If Applicant responds to the RFRP completely and by the deadline established by the City, its proposal will be evaluated in accordance with the renewal provisions of the Cable Act, 47 U.S.C. 546, the Cable Ordinance, any other applicable law, and any applicable public interest requirements.

Applicant's proposal must address- and will be evaluated in light of - the City's future cable-related needs and interests, as set forth in the Agency/Staff Report.

This RFRP sets forth a model (for example, a hybrid fiber-coaxial system architecture, with a minimum bandwidth of 750 MHz) illustrating how a proposal might meet the needs and interests.

Applicant is not required to follow this model in every respect. However, if Applicant proposes a cable system that differs from the model that the City has concluded will satisfy the requirements in this RFRP, Applicant must explain in detail each aspect in which it has departed from the model suggested by the City and why, and demonstrate that the Applicant's proposal will meet the needs and interests embodied in the model, providing sufficient information for the City to determine whether the proposal will meet its requirements. In particular, but without limitation, Applicant must show that its proposals at least equal the model in terms of the needs and interests specified in the Agency/Staff Report, such as reliability, signal quality, and upgradability. To the extent Applicant claims that its proposals will provide functionality equal to or better than that of the model, Applicant must provide sufficient information to permit the City to determine whether that claim is correct. To the extent Applicant's proposals would provide functionality less than that of the model in any respect (including but not limited to subscriber options and choices), Applicant must fully explain and justify such decreased functionality. To the extent that Applicant claims that its proposals presents a cost advantage over the model, Applicant must itemize such cost advantages and provide information sufficient to demonstrate that they represent cost savings resulting from the Applicant's proposals as a whole, as compared with the costs resulting from the model as reasonably interpreted (for example, comparison of drop replacement costs must take into account the normal rate of drop replacement applicable to any scenario, detailing such costs on an annual basis for purposes of comparison). Further, the showing must explain under what circumstances there would or would not be cost savings over a renewal term. For example, if the claimed cost savings assumes that the system need never be upgraded to the level represented by the model, the proposal should so state.

To ensure that the City can complete a full and timely review of Applicant's proposal, Applicant must include with its proposals all information on which it intends to rely in making those demonstrations, and may not seek to supply at a later date supporting information that was omitted in the proposal.

Applicant must also bear the risk that, consistent with applicable law, its failure to follow the model may result in the rejection of its proposal, if Applicant does not demonstrate to the City's satisfaction that its proposals will fully meet the needs and interests involved.

Applicant's proposals may be rejected, consistent with applicable law, if Applicant fails to provide information required in the form requested, or submits false or misleading information.

The City cautions that satisfying the requirements set forth in Sections I, II, III and IV of this RFRP, following the format set forth in Section V, and providing the required information does not guarantee Applicant a franchise under applicable law. As Congress has pointed out, even under the formal renewal procedures of 47 U.S.C. § 546 (a)-(g), it is Applicant's responsibility to submit a proposal for "equipment, facilities, and services . . . [that is] reasonable in light of future cable-related needs and interests . . . taking into account the costs thereof." Thus, if necessary, Applicant must go beyond the requirements set forth in Sections I, II, III and IV to present complete proposals that, as a whole, satisfy the community's cable-related needs and interests.

In evaluating the proposal for a renewal franchise, and consistent with the above, the City will also consider whether Applicant's proposals will in practice satisfy the future cable-related needs and interests of the community.

For example, Applicant cannot satisfy the facilities and equipment requirements by "providing" them under conditions that may impede their use. Applicant thus would not be deemed to have "provided" the required facilities and equipment for PEG use if under its proposal, for example: (1) PEG use of facilities or equipment would be subordinate to other uses; (2) there would be a charge for the use of the equipment and facilities or channels by the access entities operating the channels ; (3) the equipment or facilities generally would not be available for PEG use at all times; or (4) there are conditions on use of such facilities or equipment beyond the conditions that are imposed by operation of federal law. As a general matter, Applicant must bear the cost of all requirements, except as otherwise specifically stated herein.

Applicant's proposals should itemize in detail all costs anticipated to occur over the next franchise term, identifying those that Applicant believes may be passed through to subscribers as external costs pursuant to current FCC rate regulations. In particular, and without limitation, wherever Applicant's proposals would reduce or remove benefits received by the community under

the current franchise, Applicant must provide a detailed justification of such a reduction, based on the community's cable-related needs and interests, including any compensating or offsetting benefits Applicant believes will accrue to subscribers and/or the community, and must itemize any changes or reductions in Applicant's costs expected from each such change in franchise terms or conditions. Such reductions must also be passed through to subscribers as external cost reductions.

I. RELATIONSHIP OF CABLE ORDINANCE AND FRANCHISE AGREEMENT

As noted above, the terms of an acceptable proposal will be incorporated in a final franchise agreement, as appropriate. The agreement will include other provisions which the City may require (consistent with the Cable Act), including, but not limited to, provisions regarding the following:

use of public rights-of-way;

franchise fees;

franchise transfers;

enforcement provisions, including requirements for letters of credit, performance bonds liquidated damages provisions, and shortening and revoking a franchise.

Additionally, any cable television franchise granted will be subject to the 1981 Cable Enabling Ordinance 58462 as amended, to rules promulgated under the Cable Ordinance, to the exercise of the City's police powers and to ordinances generally applicable to all or to relevant classes of businesses or residents, including taxing, zoning, electorial code, building code and consumer protection ordinances which now exist or which may be hereafter adopted. The City reserves its right to amend the Cable Ordinance and other ordinances from time to time. The fact that an issue is addressed in a franchise agreement will not prevent the City from imposing additional or different requirements by or through the Cable Ordinance or otherwise, as permitted by applicable law. Similarly, the City is not waiving any rights or powers as to any matter where the franchise agreement is silent.

For Applicant's information, the City is preparing a proposed Draft Franchise Ordinance Agreement subsequent to the issuance of this RFRP. Those

documents are intended to serve as a model for any final new or renewal franchise agreement that be entered into with a cable operator(s) in the City. Applicant should assume that the terms of its proposal, if found acceptable, will be incorporated in an agreement using the language and structure of the draft.

Applicant is not required to address language for a Model Ordinance/Agreement specifically in its responses, but it is invited to submit any comments it may have, and Applicant must do so if it intends to contend in its proposal that a provision of the current franchise or applicable ordinances should be amended or a new provision should be added. If Applicant objects to any particular requirement in this RFRP as it might relate to a future Franchise Ordinance or Agreement, it should identify the requirement and explain, in detail, the basis for its objection, including proposed substitutions or suggested language. Such comments and or substitutions should be submitted as part of Applicant's proposal.

Applicant should be aware that the City believes that one of the legal requirements for any Applicant is that it is willing to enter into franchise agreements that satisfy legal requirements that the City is entitled to establish; and further believes that an Applicant is not legally qualified if it insists on conditioning its proposal on the City's agreement to unacceptable legal requirements. Therefore, in each case where the Applicant objects to a requirement or condition, Applicant should clearly state that the Applicant is willing to accept the condition as is, notwithstanding its objection. With respect to any provision to which the Applicant objects, a conditional response or a failure to state that the Applicant is willing to accept the condition as is will be assumed to mean that the Applicant is not willing to accept the condition, and Applicant's legal requirements and qualifications will be evaluated accordingly. Similarly, where Applicant does not object to a provision, Applicant must be willing to enter into an agreement containing that provision.

II. REQUIREMENTS AND MODEL FOR CHANNELS, FACILITIES AND EQUIPMENT

A. INTRODUCTION TO REQUIREMENTS AND CRITERIA Under the Cable Act, local franchising authorities can establish requirements in an RFRP for PEG channels, and the management and use of such channels. In addition, the Cable Act permits franchising authorities, such as the City, to establish RFRP requirements for an institutional network and institutional network channel capacity. Finally, the Cable Act authorizes the City to establish requirements in its RFRP for system facilities and equipment, including requirements for equipment and facilities for PEG use. The City has identified

its future cable-related community needs and interests in the Agency/Staff Report. The Applicant is required to submit a plan for provision of facilities, equipment and channels. At a minimum, a successful proposal must satisfy the needs and interests identified in the Agency/Staff Report.

As described in the Introduction to this RFRP, the model below illustrates how a proposal might meet those needs and interests. Assuming it is otherwise planned and designed in accordance with industry standards, the requirements for the cable system should be satisfied if the Applicant meets the specific criteria listed and rebuilds the cable system to include all of the characteristics set forth in the model below. The City is not necessarily proposing a complete cable system design. It is, however, the responsibility of the Applicant to propose a complete cable system design that is consistent with the requirements of this RFRP. Hence, the model described below assumes that the Applicant's cable system will include components of high quality and reliability, and will be designed and constructed in accordance with the highest standards of the industry and applicable law. B. CABLE SYSTEM: FUTURE REQUIREMENTS Applicant must implement, among other things, the following requirements to meet the City's future cable-related needs and interests. These changes are necessary to make the system perform satisfactorily during the term of any renewal franchises.

(a) Compliance of physical plant with the National Electrical Code, National Electrical Safety Code (NESC), and any other applicable standards.

(b) Segmentation of the system so that adequate bandwidth would be available for the provision of interactive services, pay-per-view, analog and digital tier programming.

• Activation of two-way capability throughout the entire system.

C. CABLE SYSTEM: MODEL

1. Characteristics of the System Model Based on the needs and interests identified by the City, the following model is proposed for the cable system generally, including both the subscriber network and the institutional network ("I-Net"):

(a) state-of-the-art design when built, utilizing a flexible architecture that will permit additional improvements necessary for high quality and reliable service throughout the term of the franchises;

(b) redundant routing between the headend and fiber optic nodes;

 protection against outages due to power failures of up to four hours duration occurring anywhere in the distribution system, with back-up power supplies at the headend, each fiber optic node and any other location(s) within the system necessary to maintain service to subscribers;

(d) facilities and equipment generally used in high-quality, reliable, systems of similar design;

(e) a system that meets or exceeds the technical standards set forth in 47 C.F.R. 76 Subpart K any other applicable standards, as amended from time to time, including any such standards as hereafter may be adopted by the City, subject to applicable federal law;

(f) a system that meets or exceeds all NEC, NESC, state, and other applicable guidelines for physical plant construction and maintenance;

(g) facilities and equipment sufficient to cure, and to prevent in the future, violations of FCC technical standards and other standards;

(h) all facilities and equipment necessary to evaluate system performance for purposes of complying with applicable technical standards, as such standards may be amended from time to time;

(I) headend or node design allowing the City and other authorized system users to co-locate facilities or equipment (physically or virtually) at the headend and any control centers;

(j) status monitoring equipment that monitors the cable system's performance and, among other things, alerts the Applicant when and where a complete or partial service outage has occurred;

(k) new buried plant capable of being located using currently-available locating devices;

(l) facilities and equipment capable of continuous twenty-four hour daily operation, without severe material degradation of signal, except during extremely inclement weather, or immediately following extraordinary storms which adversely affect utility services or which damage major system components;

(m) facilities and equipment capable of operating and meeting all specifications set forth herein over an outdoor temperature range of +20 degrees F. to +120 degrees F., and over variations in supply voltages from 105 to 130 volts AC (rms), without catastrophic failure or irreversible performance changes. The system shall meet all specifications over an outdoor temperature range of +10 degrees F. to 110 degrees F. and over variation in supply voltages from 105 to 130 volts AC;

(n) facilities and equipment designed, built and operated in such a manner as to avoid causing interference with the reception of off-the-air signals by a subscriber;

(o) facilities and equipment designed, built and operated in such a manner as to prevent signal ingress and egress that would pose unwarranted interference with emergency radio services, any airborne navigational reception in normal flight patterns, aeronautical navigational frequencies, or any other type of wireless communications licensed by the FCC;

(p) facilities and equipment designed, built and operated in such a manner as to protect the safety of system workers and the public;

(q) sufficient trucks, tools, testing equipment, monitoring devices and other equipment and facilities and trained and skilled personnel required to enable the Applicant to comply with each and every requirement of applicable law, including applicable customer service requirements, technical standards, maintenance standards and requirements for responding to system outages;

(r) all facilities, equipment and staff required to:

(I) properly test the system and conduct an ongoing and active program of preventive maintenance and quality control; and

(ii) be able to quickly respond to customer complaints and resolve system problems;

(s) design capable of interconnecting with other cable systems or similar communications systems (e.g., open video systems) in the area or within the City. Interconnection capabilities include exchange of the full range of signals carried on the subscriber or the institutional networks;

(t) antenna supporting structures (towers), where such structures are necessary, designed in accordance with the City's Building Code, as amended, and painted, lighted, erected and maintained in accordance with all applicable rules and regulations of the Federal Aviation Administration, Federal Communications Commission, and all other applicable federal, state or local laws, codes and regulations, all as hereafter may be amended or adopted;

(u) to the extent that Applicant uses antenna towers or other structures, arrangements through which Applicant may allow other parties to co-locate antennas on its towers or structures (including reasonable compensation therefor); and

(v) all facilities and equipment necessary to permit Applicant to comply with all FCC regulations regarding scrambling and other encryption of signals.

2. Advantages of the System Model

(a) Maximizes reliability through the use of redundant routing and status monitoring equipment.

(b) Allows further upgrading of the system with a minimum of cost and of additional disruption to the public rights-of-way.

• Produces video signals that meet or exceed FCC standards, and avoids causing interference with over-the-air signals, emergency radio services and aeronautical navigational signals.

(d) Encourages efficient use of antenna towers through co-location.

(e) Protects public safety by ensuring that all antenna towers are designed in accordance with the City Building Code, as amended, and painted, lighted, erected and maintained in accordance with applicable standards.

D. SUBSCRIBER NETWORK: REQUIREMENTS

Applicant must address, among other things, the following items to meet the City's future cable-related needs and interests:

(a) interconnection of the City system (subscriber and institutional networks) with the TCI systems in surrounding jurisdictions so that, for example, access programming placed on the system in one such franchise area can be shown in

such other franchise areas, given appropriate agreements among the parties involved. In addition, the Institutional Network must be able to access the Internet via existing City gateways;

(b) a system designed, constructed and operated in a manner that prevents significant deterioration in the quality of PEG Access signals or Leased Access signals, either upstream or downstream, as compared with any other channel on the system. Deterioration refers to any signal problem, including but not limited to ghost images and other interference and distortions;

• modulators, antennae, amplifiers and other electronics that permit and are capable of passing through the signals received at the headend or system hub without substantial alteration or deterioration, in accordance with FCC technical standards (thus, for example, the system shall include components so that a signal received at the headend or hub in color may be received by a subscriber in color, a stereo signal in stereo, and a DTV or HDTV signal in the form transmitted). Applicant shall also comply with all applicable laws and regulations concerning system compatibility with subscribers' television receivers and/or videocassette recorders. In addition, all closed-caption programming retransmitted by the subscriber network shall include the closed caption signal in a manner that renders the signal available to subscriber equipment used to decode the captioning;

(d) equipment that prevents children from ordering pay-per-view programming without parental consent. An acceptable program security system would at a minimum require a person ordering programming to provide a private identification code furnished by Applicant only to the person who subscribes to cable service. In addition, Applicant must provide equipment that allows a subscriber to block out audio and video on any channel, including preview channels;

(e) a headend or system hub(s) with sufficient ventilation and space to permit:

(I) the proper operation of equipment;

(ii) easy maintenance and identification of malfunctions and other problems; and

(iii) co-location of City equipment, as necessary;

(f) all facilities and equipment necessary to enable the City to determine whether Applicant is complying with all applicable telephone answering and transfer requirements, abandonment and busy signal rates, as such requirements may be established or amended from time to time;

(g) all facilities and equipment required to permit the City, or its authorized representative, to transmit emergency alerts over the cable system.

(h) facilities and equipment designed to technically allow access to the system by both affiliated and non-affiliated providers of non-video services, specifically Internet services, to the extent such are offered on the system.

E. SUBSCRIBER NETWORK: MODEL

1. Characteristics of the Subscriber Network Model Based on the needs and interests identified by the City, and modern TCI systems deployed in other communities, and ideal systems which permit delivery of a variety of services and options, the following model is proposed for the subscriber network. The City anticipates that TCI s proposal may differ. To the extent that it does, Applicant should explain its design philosophy for its model.

(a) 750 MHZ system using active components rated for 750 MHZ and passive components rated for 1 Ghz, so that the system can be economically and easily upgraded by switching of active components, and designed to allow segmentation so that services can betailored to subscribers

(b) a fiber optic backbone design which ensures that no more than 500 residences, businesses or other structures are served by any single fiber optic node, with redundant routing between the headend and each node to ensure greater reliability, and reduction of amplifier cascades to no more than 6 active components in any cascade between the headend (or system hub) and a subscriber, in order to provide acceptable picture quality.

 the subscriber network design ultimately adopted should permit specific program services to be directed to subscribers within each separately franchised area served by the cable system, if the cable system used in the City of St. Louis does not remain a stand-alone system during a renewal term. Specifically, the system must permit PEG programming produced for the City s franchise area to be directed to City subscribers.

(d) two-way activation with a clean return path of at least 128Khz per subscriber. A clean path for upstream video must meet FCC technical standards for downstream video; a clear path for data requires a carrier-to-noise ratio of 23dB and a carrier to distortion of 25 dB.

(e) all subscribers should continue to have access to existing analog services (tier and premium), using their own cable-ready video reception equipment (TVS and VCRs) without having to pay for additional delivery technology.

2. Advantages of the Subscriber Network Model

(a) Minimizes susceptibility to electrical interference through the use of fiber-optics.

(b) Optimizes reliability and performance by minimizing the number of amplifiers in cascade, using fiber-optics (and hence minimizes upstream and downstream noise).


Efficiently reuses bandwidth, both upstream and downstream, through segmentation of the system into neighborhood nodes.

(d) Maximizes capacity for carriage of information in the distribution network through the use of fiber-optics.

(e) Allows further upgrading of the system with a minimum of cost and of additional disruption to the public rights-of-way.

(f) Permits narrowcasting of specific PEG and other programming to the City franchise area.

(g) Allows subscribers to current analog BST and CPST service tiers, or analog premium services to continue receiving those services without rental payments for additional digital equipment, eliminating possible financial hardship for low and fixed income citizens.

F. PUBLIC, EDUCATIONAL, GOVERNMENTAL (PEG) and LEASED ACCESS: REQUIREMENTS

1. Channel Capacity for PEG Use

(a) In addition to any capacity provided on the I-Net described in Section II.I. of this RFRP, Applicant shall continue to provide at least 6 active downstream video channels on its subscriber network. The required video channels shall be allocated as follows:

PUBLIC ACCESS: ONE (1) CHANNEL
COMMUNITY ACCESS: ONE (1) CHANNEL

(Both to be programmed by a public access corporation designated by Applicant subject to Agency approval of entity, contract terms and conditions for compliance with community needs or provisions and requirements of ordinances);

EDUCATIONAL ACCESS: TWO (2) CHANNELS

One (1) Channel for Kindergarten through Grade 12 (K-12 to be programmed by the Board of Education, with availability of cable-casting hours for programs produced by other elementary/secondary educational entities) One (1) Channel for Higher Education or other Educational Access (programmed subject to availability of funding by HEC or other City-approved entity)

CITY GOVERNMENTAL ACCESS: TWO (2) CHANNELS

One (1) channel for Government Information (available to subscribers) One (1) scrambled channel for Municipal Services (available to City buildings only)

(b) Applicant may not designate for PEG use channels that suffer from interference or distortion. In addition Applicant shall ensure that the transmission quality for each PEG channel delivered on the system is the same as or better than the transmission quality of any other channel carried on Applicant's basic service tier. To the extent possible, existing PEGAccess channel assignments should be maintained and should not be changed unless there is good cause and the channel programmer consents to the change. To the extent that changes in channel number are required to ensure that a given access channel programmer is carried uniformly on one channel throughout the systems, Applicant shall compensate any access channel programmer for any costs of such change, including - but not limited to - reasonable administrative expenses and public notice and advertising as to the change. All PEG channels shall be carried on Applicant's basic service tier.

• Applicant shall provide upstream channels for PEG use in accordance with the provisions of subsection II.G.2 below.

2. PEG Access Facilities and Equipment

(a) Access Studios and Equipment: Applicant shall continue to operate and maintain public and community access studio and editing facilities currently available to the City and its residents therein, and shall provide such additional studio facilities as are necessary to ensure that the City and its residents always have the ability to produce video programming. Applicant must ensure that all studio facilities and equipment furnished pursuant to this RFRP are functional and accessible throughout the franchise term.

(b) In addition to paying the franchise fee specified, and in addition to any amounts expended by the Applicant to comply with any other PEG requirements, Applicant•s proposal shall address

1) annual operating grants to support public/community access staff and activities and 2) capital grants for adequate production equipment (including, but not limited to, studio and portable production equipment, editing and program playback equipment) at levels adequate to meet citizen demands for public and community access based on the past usage and future cable-related community needs and interests identified by the Agency.

• Wherever Applicant must provide facilities and equipment for PEG use, Applicant shall also provide such normal spares and back-up facilities and equipment (including, but not limited to, spare fibers) to ensure that all access channels can operate on a continuous basis. Throughout the term of the franchise, Applicant shall be responsible for the timely repair and replacement of all access equipment, including but not limited to, transmission equipment being used by any of the City•s designated providers, in producing or transmitting PEG programming, and production equipment for Public and Community Access providers, including equipment provided under or used during Applicant•s prior franchises. (d) Capital funds and grants, studio facilities and equipment specified in this Section II.F.2 do not constitute, and are not part of a franchise fee, and fall within one or more of the exceptions to 47 U.S.C. • 542.

3. Use of PEG Channels and Facilities

(a) The City or the entity that manages a PEG channel may adopt reasonable rules regarding the use of that channel.

(b) Except as expressly permitted by federal law, Applicant shall not exercise any editorial control over the content of programming on the designated PEG channels (except for such programming as Applicant itself may produce and cablecast on such channels).

• The facilities, equipment and capacity provided for PEG programming on the subscriber or institutional networks shall be available at no charge to the entity that manages the PEG channel.

4. Requirements Regarding Channels Set Aside for Commercial Use Applicant shall provide leased access channels as required by federal law.

G. PUBLIC, EDUCATIONAL, GOVERNMENTAL ACCESS: MODEL

Based on the needs and interests identified by the City, the following model is proposed to meet PEG channel and support needs, in order for the City to protect its interests in regards to PEG Access on evolving cable TV delivery technology and systems that may develop during the term of a renewal franchise.

1. Characteristics of Model: Channel Capacity for PEG Use

(a) Any reference to an upstream or downstream video channel for PEG use refers to a standard (6 MHZ) video channel. Any entity that manages or operates a PEG access channel may use that capacity to provide one or more channels of service. If any downstream or upstream video channel reserved for PEG use is digitally compressed, the additional capacity created by compressing the PEG video signal shall continue to be controlled by the entity that manages or operates the channel. In addition, should the system carry local broadcast stations in a high definition format, and use more bandwidth for that transmission than 6 MHZ, upon request additional bandwidth will be allocated to PEG channels so that those channels may also cablecast in high definition format.

(b) To the extent that the resources that determine access to and use of Applicant's system are not expressed solely in terms of channels (for

example, in storage capacity on video and computer servers), Applicant should provide 10% of the system's maximum capacity in such other resources.

• If Applicant makes changes to its cable system that necessitate modifications to access facilities and equipment, Applicant shall provide any additional facilities or equipment necessary to implement such modifications within 30 days of the date that the system changes are made, so that PEG facilities and equipment may be used and operated as intended, and (among other things) so that live and taped programming can be produced and cablecast efficiently to subscribers.

(d) If Applicant begins offering video on demand for commercial purposes, it shall provide the facilities and equipment, including the storage and forwarding facilities equipment, required to permit the provision of PEG programming on demand, without cost to the City, by any entity managing or operating a PEG channel, or the PEG programmer.

2. Characteristics of Model: Upstream Access Feeds

(a) Applicant shall continue to provide, at no cost to the City or any PEG entity, upstream channels, consisting of dedicated, bi-directional links, wholly fiber optic or of equivalent quality and reliability, between Applicant's system headend or hub and the following locations:

(1) Applicant's public and community access studio(s);

(2) Government Access Studio

(3) Higher Education Channel (or successor) feed origination site

(4) K-12 Educational Access main studio

(5) City Hall and Fire Alarm headquarters

In addition to providing the foregoing upstream feeds, to enable transmission of more versatile access programming,

(6) Applicant shall install a dedicated, bi-directional link between both the "Board of Aldermen Chambers" and "City Hall Room 208" and the City Hall upstream feed connection so that: (I) video programming originated in Aldermanic Chambers and Hearing Rooms can be carried upstream to the

Government Access channel origination site, and transmitted to TCI's system headend or hub and (ii) video programming originated at the government access facility can be carried to both locations in City Hall. The bi-directional feeds must be able to transmit pictures meeting FCC standards.

(7) Applicant shall address in its proposal connection of up to 3 K-12 satellite studios to the K-12 main studio, to allow multiple feeds from Board of Education facilities or other entities' K-12 origination sties

Applicant shall also describe its timetable for replacing existing upstream channels with dedicated, bi-directional fiber optic links to Applicant's headend or hub(s). Until these links are completed and activated, however, Applicant shall continue to operate existing feeds, and to provide upstream capacity on the subscriber and institutional networks.

Every fiber optic link provided pursuant to this subparagraph II.G.2(a) shall be in addition to any capacity provided on the subscriber network.

(b) Each upstream feed specified in subparagraph (a), above, shall be completed and operational within six months of the effective date of any renewal franchise agreements, and shall be designed and built to include all equipment, including but not limited to laser transmitters, modulators and processors, drops, and wiring, so that each origination site can send signals to the headend or hub on a number of upstream channels at least equal to the number of downstream channels that may be transmitted from that site pursuant to Section II.F.1(a); and so that the origination sites can each remotely and without assistance from Applicant or access to its headend (I) receive signals from distant locations; (ii) route signals originated at that site or satellite locations onto the PEG access channels on the subscriber network; and (iii) otherwise control the signals to allow for smooth breaks, transitions, insertion of station IDs and other material. Applicant shall bear the cost of acquiring all equipment necessary to meet this requirement.

' If any origination site designated in this Section II.G.3 is moved to another location, Applicant shall transfer the upstream feed(s) to the new location (including, without limitation, moving terminal equipment and splicing fiber, as necessary).

(d) The Institutional Network must be able to be used for upstream feeds from key Institutional Network locations to the Government Access studio. Key sites

identified by the Agency include, without limitation, CEMA, City Hall, Fire Department Headquarters.

(e) Applicant shall provide, install and maintain all equipment for amplification, conversion, receiving, transmitting, switching and headend processing of signals to be used for public, educational and governmental purposes on the systems, to ensure that such signals can be received by subscribers as intended. In addition, Applicant should provide character generation and playback equipment that allow text programming to be placed on the PEG Access channels when video programming is not cablecast.

(f) Applicant shall ensure that programming received via the upstream feeds is retransmitted as sent by the PEG programmer, without changing the attributes of the signal in such a way as to effectively degrade the output.

(g) Any fiber optic return feeds provided as part of the institutional and subscriber network shall include facilities and equipment designed to ensure that, with respect to channels inserted onto the subscriber network at the headend, the carrier-to-noise, carrier-to-composite-disturbances, and chroma, luminance and audio characteristic of PEG channels are the same as or better than those of any other channels carried on the cable system. The facilities and equipment provided would not be adequate if there would be more deterioration on channels set aside for PEG use on the institutional network or subscriber network than on other channels on the system. The term "deterioration" refers to any signal problem that is addressed in the FCC's technical standards, including, but not limited to, ghost images and other interference, distortions, degradation of chroma and luminance, and imperfections.

3. Characteristics of Model: Use of PEG Channels

The downstream and upstream channels provided pursuant to this section may be subdivided or compressed at the sole discretion of the entity responsible for channel management.

4. Characteristics of Model: Operating Support and Capital Grants

(a) Operating support for public and community access facilities should be at levels that adequately support future operations, including annual cost-of-living increases over the term of the franchise and at amounts no less than existing

support for staff and operations under the current franchise, and as outlined in the Staff Report of Future Cable-Related Needs and Interests.

(b) Capital funds should be provided for dedicated public/community access facilities and equipment. Amounts suggested for meeting needs for replacement and new equipment are: $ 205,242 in year 1 of the franchise; $95,895 in year 2; $193,773 in year 3, as outlined in the DHTV Equipment Inventory Assessment attached as an Appendix to the Staff Report.

• The capital grants cited in Section II.F.2 and paragraph G4(b) above, would be payable at the times specified in a renewal franchise agreement.

(d) In addition to paying the franchise fee specified, and in addition to any amounts expended by the Applicant to comply with any other PEG requirements, Applicant may propose voluntary support or capital grants, or in-kind donations of equipment and services, to support K-12 educational access. Such cash or in-kind support may be used by the recipient to enhance their educational access facilities and equipment (including, but not limited to, studio and portable production equipment, editing and program playback equipment), or foster video training or production.

5. Advantages of the Model

(a) Ensures that PEG Access programming is delivered to all end-viewers in formats or delivery modes that match any overall changes to or technological development in the subscriber network.

(b) Ensures that quality video and audio signals are delivered to the downstream dissemination point (headend or hub) on the subscriber network.

• Does not financially burden Access entities for Applicant•s changes to the system.

(d) Provides more versatile live government programming to more effectively and promptly serve or communicate with constituents and citizens during normal and emergency situations.

(e) Provides training opportunities and experience for city residents in the growing video production sector, assisting in the development of a skilled workforce within the City.

H. CABLE DROPS AND OUTLETS FOR GOVERNMENT FACILITIES: MODEL

Based on the needs and interests expressed by the City and educational institutions therein, the following model has been identified as addressing those needs.

1. Characteristics of the Model: Drops and Service Outlets

(a) Applicant shall, without charge, provide the following to each fire station, public school, accredited private non-profit school, or other tax-exempt educational college or facility, police station, public library, City community center, public access facility, City department and agency (including multiple connections for multiple sites belonging to a given agency or department), and City facilities (including multiple connections, as necessary) designated by the City from time to time:

(1) at least one activated subscriber network drop and outlet; and

(2) all terminal equipment necessary to receive all subscriber network services at each outlet with all capabilities or options currently afforded by the system.

(b) Applicant shall charge only its direct cost of installing any additional subscriber network drops and service outlets requested by the City. Additional terminal equipment for such subscriber network outlets shall be provided by Applicant free of charge.

• Applicant shall, as a matter of contractual obligation, ensure that all signals are provided at the connections specified above with sufficient strength to supply the site (e.g., the signal must be strong enough at a government or school drop that it can be further amplified to distribute it throughout the facility). Specifically, Applicant shall ensure a signal strength of no less than +15 dBmv, except that if the FCC should establish a different standard governing such connections that on all channels achieves the same purpose as the standard herein, the FCC's standard shall govern.

2. Characteristics of the Model: Terminal Equipment Upgrades

Whenever necessary, or dictated by changes in Applicant's technology, Applicant shall upgrade all equipment provided pursuant to this section II.H, in order to ensure that the City can receive all services offered by Applicant.

3. Characteristic of the Model: Inside Wiring

Applicant shall, at no cost to the City, provide and install all inside wiring necessary for the service connections required under this Section II.H.

4. Advantages of the Model

(a) Government employees in all departments may continue to take advantage of information and training programs offered on the Government Access Channels.

(b) Schools deploying television sets in more than one classroom or location will receive adequate signal strength to service their facility, enabling more students to participate in distance learning or educational program viewing, including TCI's "Cable in the Classroom" programming.

I. INSTITUTIONAL NETWORK: MODEL

The City's Needs Assessment (and supporting studies/surveys and documents) establish a need and interest in continuing to link a number of City sites together with a fully fiber optic institutional network or one of equivalent quality and reliability. The City, however, recognizes that TCI may take the cost of satisfying the City's needs into consideration when it submits proposals in response to this RFRP. Consequently, the City proposes the model set forth below, as a reasonable alternative to connecting all I-Net sites identified by the City with fiber. This model will satisfy the City's institutional network needs and interest, provided that:

(I) all other requirements and needs are satisfied; and (ii) TCI adequately demonstrates that the cost of constructing a fully fiber optic I-Net to the locations specified in the Agency Report is excessive.

Since the City's institutional network will function as part of an anticipated interconnected subscriber network that also serves jurisdictions surrounding the City, and because the City has an interest in exchanging information with those municipalities and counties, as well as the state of Missouri, this section of the

RFRP also addresses interconnectivity needs of the City with respect to shared databases and other governmental exchange .

1. Requirements of the Model

(a) Applicant is authorized and required to operate any existing institutional systems, to the extent such systems now exist and are operational, including, but not limited to, any upstream bandwidth, subscriber network capacity, institutional network links or other circuits it currently provides to the City, until such time as an institutional network upgrade described herein is completed and fully activated.

(b) The I-Net upgrade described herein shall supplement or replace any required facilities the City currently utilizes.

2. Characteristics of the Model: I-Net Architecture

a) The following general characteristics of the Model Government I-Net shall be addressed by Applicant in its proposal:

(1) The I-Net shall be constructed with single-mode fiber, using a multi-ring configuration which provides redundant routing to priority I-Net sites designated by the City The backbone ring shall have at least 24 fibers dedicated for the sole use of the I-Net. Each fiber link to an I-Net facility shall: (I) contain at least 12 fibers in and 12 fibers out; (ii) be capable of bi-directional operation; and (iii) be provided at no charge to the City or other non-profit user institutions authorized by the city for participation on the Network. At a minimum, the City I-Net must be designed so that all I-Net sites can reliably send and receive video and data signals, as desired. The I-Net shall be designed with a minimum capacity of 155 Mbps over each fiber, shall be scalable in order to be able to provide faster transmission speeds in the future, and shall be initially activated to provide 100 Mb/s ethernet service to every I-Net location.

(2) The I-Net shall be designed so that the City Communications Division Facility (CCDF) can be a common data and video monitoring and network control point for the City I-Net. Each I-Net site may be connected to the CCDF either through a direct fiber optic ﷺhome runﷺ or by way of the backbone ring. The design shall enable video and data signals to flow seamlessly between all facilities on the interconnected networks.

(3) The I-Net shall be designed to enable video programming originated at key City or municipal I-Net locations to be routed through the Communications Division onto Government Access channels on the subscriber network, or video from any I-Net site to be routed to another I-Net site.

(4) In addition, the City, or its designees, should be able to exchange video and data signals with other jurisdictions that are interconnected with the City's I-Net, subject to agreement of the participating parties.

(5) At no cost to the City, and at each I-Net location, Applicant shall provide and install all terminal equipment, electronics and dataports at the interior building location specified by the City which serves as the dataport at each I-Net site for (I) the I-net connection and (ii) the LAN communications hub for the building.

(6) To minimize costs, Applicant shall use existing fiber wherever possible, and shall co-locate I-Net fiber with subscriber network fiber to the greatest extent possible. The City may make available municipal conduit for portions of the network, to the extent that such use would not interfere with existing municipal infrastructure uses.

(7) The I-Net must be capable of accommodating fully interactive video and data services. All video must be digitally transported. Each link capacity must be designed for 155 Mbps or greater, and must initially be able to carry 100 Mb/s and meet broadcast video standards used for Access channels.

(8) To ensure uninterrupted institutional network operation during any local power outage affecting the subscriber network, Applicant shall provide for I-Net backup power.

(9) Designated City personnel shall have 24 hour access, 7 days a week, to any I-Net equipment location not under direct City control and under supervision of Applicant personnel. The City shall be able to restrict access to I-Net equipment and terminations to specifically authorized City personnel. Any I-Net link to the TCI headend shall be routed through the CCDF for network control and security with a firewall that ensures that City information does not flow to TCI.

(10) The I-Net physical plant shall comply with the National Electrical Code (NEC), the National Electrical Safety Code (NESC), all applicable State, City, and municipal codes, and industry standards regarding fiber optic installation.

(11) The I-Net shall be designed and operated to maintain a bit error rate of 1 x 10-8 or better. The fiber optic plant shall be consistent with industry standards. The operator shall provide the City with documentation of testing demonstrating that all I-Net components comply with these standards. The City may require spot testing of plant to verify compliance and participate in and observe testing.

(12) The I-Net shall be designed, constructed and maintained by the Applicant so that the full I-Net (including plant and electronics) operates in accordance with Balker industry uptime standard of 99.99% reliability (i.e. less than 52.5 minutes of outage annually).

(b) The City I-Net shall consist of single-mode fiber optic lines connecting the following sites to each other:

City Hall
Municipal Courts Building
Civil Courts Building
City Court Building at 14th and Olive
Juvenile Court
Fire Department Headquarters on Jefferson
City Police Department Headquarters and Area Stations I, II and III
Police Training Facility
Morgue & Medical Examiner
Soldier&#xfffd;s Memorial (City Emergency Management Agency)
City Health Department offices and clinics
Street Department on Hampton
City Fleet Maintenance Facility
Personnel Division at 13th and Convention Center Plaza
Refuse North
Refuse South (and Animal Control) on Gasconade
Department of Corrections, including MSI and New Downtown Jail
Main Branch St. Louis Public Library
Airport
Public Utilities (Kingshighway)
Water Division Office and Facilities (Chain of Rocks, McRee, Compton Hill)
Communications Division
Parks Department (Forest Park)
Parks Department (13th Street)
Recreation Centers
Airport

Fire Department Engine Houses

Any additional government facility locations designated by the City. Applicant's headend to the extent necessary for operation of the Institutional Network

If existing site locations change, the I-Net shall be extended to the new locations, unless the City agrees that extension is impractical.

The City I-Net shall be interconnected with any other jurisdictions' institutional networks (to the extent agreed upon by the jurisdictions and required by the City) through Applicant's interconnection between the City's subscriber network and the Applicant's subscriber network in surrounding jurisdictions.

(d) The I-Net shall be designed to enable video and data signals to flow seamlessly across all facilities on the interconnected networks, and redundantly to Applicant's network headend or hub through the Communications Division to any channels on the subscriber network dedicated for Government Access use. Among other things, the City or its designees should be able to send or receive video and data signals to or from other jurisdictions that are connected to any integrated I-Net. In addition, the City or its designees must be able to route video programming received over the I-Net onto Government channels located on the subscriber network or onto the institutional network.

(e) To meet the needs and interests of separately located City agencies, the I-Net shall be designed to interface with all existing frame relay, T-1, and microwave systems used by the City's Police and Fire Departments or other municipal communications networks.

3. Characteristics of Model: I-Net Functionality

In addition to providing the dark fiber connections described herein, Applicant should propose, at no cost the City, to furnish all terminal equipment necessary to: (I) provide the functionality described herein; (ii) connect with standardized electronics and equipment provided by the City's Information Services Group for each location; and (iii) meet the institutional network needs and interests delineated in the Agency Report.

4. Characteristics of Model: I-Net Ownership and Operation

(a) The I-Net shall be owned, operated and maintained by Applicant, but the City reserves the right to arrange for maintenance of the I-Net at Applicant's expense, if Applicant fails to maintain it in accordance with the reliability standards specified in the franchise agreement. Notwithstanding the foregoing, the City may require, at its discretion, that operation and maintenance of the institutional network be performed by a third-party provider agreed upon by the City and Applicant. The City reserves the right to retain an independent engineer to periodically evaluate the condition and performance of the I-Net at Applicant's expense.

(b) Applicant shall provide repair and/or replacement of fiber optic plant in the event of damage or failure. Applicant shall respond to such damage or failure within two hours of notification and complete repairs within 12 hours of notification.

• The City shall have exclusive use of the entire 24-strand capacity of the integrated institutional network. The Agency shall have authority to resolve any disputes regarding allocation of I-Net capacity.

5. Advantages of the Model

(a) Corrects Operator performance deficiencies in meeting current franchise requirements for provision of 6 digital data carrier channels by providing reliable connections between City facilities.

(b) Improves efficiency of City public safety and operational functions/communications to facilitate exchange of critical video and data information, databases and electronic document exchange among City departments over a system occupying the City's public-right-of-way.

J. IMPROVEMENT OF SYSTEM FACILITIES AND EQUIPMENT OVER DURATION OF FRANCHISE

1. Terms and Conditions

(a) During the franchise term, Applicant is obliged to maintain its existing facilities in accordance with good industry practice and to upgrade its subscriber network, as dictated by advances in technology.

(b) As required in Ordinance 59197, and to meet the City's current need and interest, a franchise terms of no more than five years will ensure that there is in the near future an opportunity to review the adequacy of the systems and their continued ability to meet the City's cable-related needs and interests, in light of changes in technology and the market. Thus, the model assumes that any franchise renewal would be granted for a term of no more than five years.

2. Alternate Proposals

(a) If Applicant proposes a franchise term or extensions that exceeds five years, then Applicant must agree that based on changes in technology, the City may require Applicant to install additional or new equipment and facilities (including PEG facilities and equipment as required by design changes made by Applicant) and otherwise upgrade or rebuild its system during the franchise term, to ensure that the subscriber network remains capable of meeting community cable-related needs and interests, and of providing high-quality service throughout the City. The City must be able to establish specific requirements, at any time during the middle three years of a franchise term longer than 5 years.

(b) In addition, if Applicant proposes a cable system that differs from the model, Applicant must agree that the City may establish upgrade requirements as described in the preceding section if cable technology develops in such a way that the then-current design or operation of Applicant's system would preclude subscriber options and choices comparable to those commonly available in other cable systems of comparable size in the United States (for example, where equipment and facilities that would offer significant benefits to subscribers could not be used due to Applicant's then-current system design). This option may be invoked at any time during the franchise term.

K. USE OF EQUIPMENT AND FACILITIES

a) This RFRP does not seek to establish requirements for video programming selection, except as provided in 47 U.S.C. § 544(h).

(b) Applicant should include its proposals both descriptions of broad categories and specific tiers/ individual services of video programming it plans to offer, specifying which are analog and which are digital tier services. Forms are provided for this purpose (IX).

c) Applicant should include in its proposal descriptions of non-video, data or telecommunications services it proposes or plans to provide over this network. Form X is provided for this purpose. To the extent that Applicant proposes and provides services other than video programming over its subscriber network, Applicant must comply with applicable federal or local requirements regarding subscriber and third party access to those services, and acceptance of terms and conditions for provision of non-cable telecommunications services, including payment of appropriate fees.

d) Applicant should specify whether it agrees that any services offered or proposed are in accordance with paragraphs b) and c) above are Title VI services subject to cable franchise regulations or whether it claims that such services are not subject to Title VI regulation.

e) Applicant should use Form IX to describe how its proposal meets the community need for afordability of services and compatibility with subscriber equipment.

III. CONSTRUCTION TIMETABLE AND CONSTRUCTION CONDITIONS

Based on the cable-related needs and interests identified by the City, the following model is proposed regarding construction work in the system.

A. TIMETABLE FOR CONSTRUCTION AND PROVISION OF FACILITIES AND EQUIPMENT Applicant shall begin construction of any proposed upgrades to the cable system (including the subscriber network and the I-Net) within three months of the effective date of the franchise, and shall complete construction within twenty-four months after beginning such construction. Penalties may be imposed for failure to meet deadlines specified in the Franchise Ordinance or Agreement.

B. AREAS SERVED Applicant shall build its system so that it is able to provide service to all areas located within the City, including downtown.

C. LINE EXTENSION REQUIREMENTS

1. Line Extensions Applicant must extend its cable system so as to provide service, upon request, to all parts of the City containing new and in-fill housing. Such extensions, whether aerial or underground, must be completed in conjunction with the City�s or developer�s utility installation timetables, to avoid multiple disruptions and delays, and to ensure that cable services are

available to those residences no later than their purchase or occupancy date. Applicant is responsible for ensuring adequate budget is available for such projects, especially downtown, on a timely basis.

Applicant shall extend its system to low income areas at least as quickly as it is extended to higher income areas to avoid economic redlining.

2. Subscriber Drops/Installation

Except as federal law may otherwise require, Applicant shall, upon request:

(I) extend its trunk and distribution system to any subscriber located within two hundred-fifty feet of a main distribution cable located in the public rights-of-way at its standard installation charge, unless Applicant demonstrates to the City's satisfaction that extraordinary circumstances exist requiring an exemption; and

(ii) extend its trunk and distribution system to any potential subscriber outside the two hundred-fifty foot limit, provided that Applicant may charge the potential subscriber for the cost of the additional actual length of the installed drop (over 250 feet), or the shortest distance to the point where Applicant would be required to extend its distribution system, whichever is shorter, except where Applicant has demonstrated to the City's satisfaction that extraordinary circumstances exist requiring an exemption.

3. Cost Sharing

To the extent that Applicant claims extraordinary circumstances suggest that a subscriber or developer should share in the cost of plant extension to within 250 feet of a subscriber location, Applicant shall make formal request to the Agency supported by cost and other documentation and agree to abide by decisions of the Agency in such matters.

4. Timetable for Extension

Applicant must extend service to any person who requests it:

(I) within 7 business days of the person's request if the person resides no further than 250 feet from Applicant's distribution system;

(ii) within 15 business days if the person resides more than 250 feet from Applicant's distribution system, but the distribution system does not need to be extended for more than one-eighth mile to provide service; and

(iii) within 3 months if extension of distribution system for one-quarter mile or more is required.

5. Location of Drops

In locations where Applicant's system must be underground, drops must be placed underground as well at Applicant's expense. Except as federal law may otherwise require, in any area where Applicant would be entitled to install a drop above-ground, Applicant will provide the homeowner the option to have the drop installed underground if requested, but may charge the homeowner the additional difference between the actual cost of the standard above-ground installation (regardless of price currently charged) and the actual cost of the underground installation. In all cases where new developments and subdivisions are to be constructed and to be served in whole or in part by underground power and telephone utilities, and the owner or developer of such areas provides reasonable notice to Applicant of the construction timetables, availability of trenches, backfill and specifications of all necessary substructures in order that Applicant may install all necessary cable facilities, Applicant is responsible for ensuring that adequate budget is available for it to respond to developer's reasonable notice. In no event shall such undergrounding be at any expense to the City.

6. PEG Facilities

Applicant shall extend the subscriber network and the institutional network to any PEG facility specified by the City at no cost to the City or operating entity. Any line extension provided under this subsection shall be constructed in a manner that will ensure that: (1) all signals delivered to each facility's drop and/or subscriber tap are at least +15 dBmv at the demarcation point so that they can be amplified and distributed throughout the facility; (2) the signals comply with applicable standards.

7. Underground and Aerial Construction

System cable wires and facilities may be constructed overhead where poles now exist and electric or telephone lines or both are now overhead. Where no overhead poles exist all cables and facilities shall be constructed underground,

excluding system passive or active electronics that may be housed in low-profile, above-ground pedestals. Whenever and wherever electric lines and telephone lines are moved from overhead to underground placement, all cable system cables shall be similarly moved at Applicant's sole expense.

D. CONSTRUCTION STANDARDS AND PROCEDURES

1. Construction Standards

The construction, operation, maintenance, and repair of the system shall be in accordance with all applicable sections of the Occupational Safety and Health Act of 1970, as amended; the most current edition of the National Electrical Safety Code and National Electrical Code; Obstruction Marking and Lighting, AC 70/7460 Federal Aviation Administration; Construction, Marking and Lighting of Antenna Structures, Federal Communications Commission Rules Part 17; AT&T Manual of Construction Procedures (Blue Book); Maryland Utility Construction Requirements; City of St. Louis Code; Applicant's Construction Procedures Manual to the extent same does not conflict with applicable law and codes; and other applicable federal, state, or local laws and regulations, all as hereafter may be amended or adopted.

In the event of a conflict among codes and standards, the most stringent code or standard shall apply (except insofar as those standards, if followed, would result in a system that could not meet requirements of federal, state or local law, or is expressly preempted by other such standards). The City may adopt additional standards as required to ensure that work continues to be performed in an orderly and workmanlike manner.

Prior to the beginning of any construction under a renewal franchise, Applicant shall update its construction procedures manual(s), addressing matters including but not limited to changes in technology and procedures for cutover to any new system or portion of a system. Applicant shall provide the City with a copy of this manual 90 days before beginning construction, and its construction procedures shall be subject to the City's approval.

2. Standards for Subcontractors

In addition to Applicant, any contractor or subcontractor used for work or construction, installation, operation, maintenance, or repair of system equipment must also be properly licensed under laws of the State of Missouri and the City of St. Louis, and all applicable local requirements for electric or

communications contractors. Each contractor or subcontractor shall have the same obligations with respect to its work as Applicant would have if the work were performed by Applicant. Applicant must ensure that contractors, subcontractors and all employees who will perform work for it are trained and experienced. Applicant shall be responsible for ensuring that the work of contractors and subcontractors is performed consistent with the franchises and applicable law, shall be fully responsible for all acts or omissions of contractors or subcontractors, shall be responsible for promptly correcting acts or omissions by any contractor or subcontractor, and shall implement a quality control program to ensure that the work is properly performed.

3. Initial and Continuing Tests

Applicant shall perform all tests necessary to demonstrate compliance with the requirements of the franchises and other performance standards established by law or regulation, and to ensure that system components are operating as expected. All tests shall be conducted in accordance with federal rules.

4. Inspections during Construction

The City may conduct inspections of construction areas and subscriber installations, including but not limited to, inspections to assess Applicant's compliance with construction and installation requirements. Inspection or non-inspection does not relieve Applicant of its obligation to build in compliance with all provisions of the franchises.

5. Performance Tests

Applicant shall conduct tests as follows:

(a) acceptance tests on each newly constructed or rebuilt segment prior to subscriber connection or activation;

(b) proof of performance tests on the system at least once every six months or as required by FCC rules, whichever is more often, except as federal law otherwise limits Applicant's obligation;

• special tests when subscriber or user complaints indicate tests are warranted; and

(d) special tests at the City's request.

6. Other Construction Procedures.

(a) All wires, cable lines, and other transmission lines, equipment, and structures shall be installed and located to cause minimum interference with the rights and convenience of property owners.

(b) All installation of electronic equipment shall be of a permanent nature, using durable components.

 Without limiting the foregoing, all antennae and their supporting structures (towers) shall be designed in accordance with the Uniform Building Code as amended, and shall be painted, lighted, erected, and maintained in accordance with all applicable rules and regulations of the Federal Aviation Administration and all other applicable federal, state or local laws, codes, and regulations, all as hereafter may be amended or adopted.

(d) Without limiting the foregoing, all of Applicant s plant and equipment, including, but not limited to, the antennae site, headend and distribution system, towers, house connections, structures, poles, wires, cable, coaxial cable, fiber optic cable, fixtures, and apparatus shall be installed, located, erected, constructed, reconstructed, replaced, removed, repaired, maintained, and operated in accordance with good engineering practices, performed by experienced and properly trained maintenance and construction personnel so as not to endanger or interfere with improvements the City shall deem appropriate to make or to interfere in any manner with the public rights-of-way or legal rights of any property owner or to unnecessarily hinder or obstruct pedestrian or vehicular traffic.

(e) All safety practices required by law shall be used during construction, maintenance, and repair of the cable system. The Franchisee shall at all times employ ordinary care and shall install and maintain in use commonly accepted methods and devices preventing failures and accidents that are likely to cause damage, injury, or nuisance to the public.

(f) Applicant shall not place facilities, equipment, or fixtures where they will interfere with any gas, electric, telephone, water, sewer, or other utility facilities, or obstruct or hinder in any manner the various utilities serving the residents of the City of their use of any public rights-of-way.

(g) Any and all public rights-of-way, public property, or private property that is disturbed or damaged during the construction, repair, replacement, relocation, operation, maintenance or construction of the systems shall be repaired,

replaced and restored, as appropriate, in substantially the same condition and in a good workmanlike, timely manner, in accordance with the standards for such work set by the City. With respect to damage or disturbances to public rights-of-way and public property, all repairs and restoration shall be performed by Applicant, at no cost to City, in accordance with the City Code, Franchise Ordinance 59197 Sections Eight or Nine or any successor provision. All repairs, replacements and restoration shall be undertaken within no more than ten (10) days after the damage is incurred, and shall be completed as soon as reasonably possible thereafter. Applicant shall guarantee and maintain such restoration for at least one year against defective materials or workmanship.

(h) Prior to erection of any towers, poles, or conduits or the construction, upgrade, or rebuild of the cable system, Applicant shall first submit to the City for approval a concise description of the cable system facilities proposed to be erected or installed, including engineering drawings, if required by the City, together with a map and plans indicating the proposed location of all such facilities. This requirement may be satisfied as part of the City's normal permitting process or other City law, where applicable.

(I) No construction, reconstruction, installation, or relocation of the system or any part thereof within the public rights-of-way shall be commenced until all applicable written permits have been obtained from the proper City officials. In any permit so issued, such officials may impose such conditions and regulations as a condition of the granting of the permit as are necessary for the purpose of protecting any structures in the public rights-of-way and for the proper restoration of such public rights-of-way and structures, and for the protection of the public and the continuity of pedestrian and vehicular traffic.

(j) Applicant shall notify the public prior to commencing any proposed construction that will significantly disturb or disrupt public property or have the potential to present a danger or affect the safety of the public generally. In addition, before entering onto any person's property, Applicant shall contact the property owner or the owner's designated agent at least two days in advance to obtain permission. If Applicant must enter premises, it must schedule an appointment at the convenience of the owner or resident.

(k) Applicant must submit a system design and construction plan. Applicant must also provide as-built system design maps.

(l) Following the commencement of construction, and until construction is completed, Applicant must meet with the Agency and provide maps and written construction reports every three months, unless the Agency waives this

requirement based on circumstances or adequacy of other information. Applicant must also provide written monthly construction updates.

(m) All maps required by the City shall be provided both in hardcopy and in a CAD (computer-aided design) or other electronic format approved by the City. The maps shall be developed on the basis of post-construction inspection by Applicant and construction personnel to assess compliance with system design. Any departures from design must be indicated on the as-built maps in order to assist the City in assessing Applicant's compliance with its obligations under a renewal franchise and applicable law. If the City offers Applicant the opportunity to provide information to be stored on the City's geographic information system, Applicant must provide the required information in compatible form.

7. System Maintenance

(a) Interruptions to be Minimized. Applicant may intentionally interrupt service on the cable system only for good cause and for the shortest time possible and (except in emergency situations or to the extent necessary to fix an affected subscriber's service problems) only after a minimum of forty-eight hours' prior notice to subscribers and the City of the anticipated service interruption; provided, however, that the minimum prior notice period shall be twenty-four hours, for planned maintenance that (I) does not require more than two hours' interruption of service; and (ii) occurs between the hours of 1:00 a.m. and 5:00 a.m.

(b) Maintenance Practices Subject to Regulation. Maintenance of the system shall be performed in accordance with the technical performance and operating standards established by FCC rules and regulations. The City may monitor Applicant's maintenance practices and, to the extent permitted by applicable law, may waive requirements or adopt additional requirements as reasonable to ensure the system remains capable of providing high quality service.

IV. OTHER FRANCHISE TERMS AND REGULATORY CONDITIONS

A. AUTHORITY

As pointed out in the Introduction to this RFRP, any renewal franchise will be embodied in a franchise agreement based on a Draft Franchise Ordinance and Draft Franchise Agreement being developed by the Agency to incorporate the

elements described in this proposal. A renewal franchise will also be subject to City law, which may be amended pursuant to applicable law. A renewal franchise will thus be subject to terms and conditions in addition to than those specifically set forth in this RFRP.

Applicant is required to meet the City's cable-related needs and interests, taking into account the cost, with respect to such terms and conditions set forth herein and in the Agency/Staff Report and to comply with all applicable federal, state, and City law in its proposal. The City may reject any proposal which does not thus comply with applicable law. A proposal must not afford additional rights to Applicant, or impose new limitations on the City's authority, beyond those rights and limitations embodied in the current Franchise Ordinances, except as specifically modified in this RFRP and its attachments.

B. TERMS AND CONDITIONS

In addition to other generally required terms and conditions, Applicant should expect to meet requirements in regards to the following items, given as examples but not by way of limitation:

1. PERFORMANCE BONDS

Amount and nature of instrument will be determined based on factors including -but not limited to- amount of new and upgrade construction, requirements of the Board of Public Service, coordination with bonds required under other applicable ordinances,

2. INSURANCE

Applicant will be required to provide certificate of insurance naming City as co-insured in amount to be determined.

3. PROW PERMITS

Applicant must comply with all requirements for applications for permits and conditions for issuance of public right-of-way use or excavation permits, including posting of separate excavation bonds.

4. CONTRACTOR LICENSES

Applicant must comply with requirements for City Communications Licenses for itself and agree to use of only licensed contractors in building or operating the system.

5. BUSINESS TAXES AND LICENSES

Grant of franchise and payment of franchise fees does not exempt Applicant from payment of fees ordinarily imposed on all businesses in the City, including but not limited to, business licenses, occupancy permits, property taxes, earnings taxes, or payments to the City for provision of services other than Title VI cable TV services.

6. DOCUMENT SUBMISSION

Applicant is required to file with the Agency copies of any documents filed with any federal or state agency or legislative body that pertain to this franchise or system, such documents to be submitted on the same day as the original filing.

7. OPEN ACCESS CABLE MODEM PLATFORM

Applicant is required to comply with all applicable ordinances or federal regulations regarding provision of services.

8. FRANCHISE FEES

Applicant is required to make payment of franchise fees and provide revenue reports in formats to be approved by the City, with payment dates dictated in the Ordinance, with penalties and interest applicable to late or incorrect payments. Franchise fees should be paid on the full amount of bundled discounted services, with discount differential applied equally to cable and non-cable services.

9. LIQUIDATED DAMAGES, FINES AND PENALTIES

City reserves the right to require payment according to schedules established in the renewal ordinance for types and duration of violations.

10. FEDERAL REQUIREMENTS

Applicant is required to comply with all laws, regulations and rules of the federal government, including but not limited to rate regulation, technical

performance parameters, leased access, and other items as established now or thereafter in Section 76 of the FCC Rules.

V. APPLICATION FORM FOR A CABLE TELEVISION SYSTEM FRANCHISE IN THE CITY OF ST. LOUIS, MISSOURI

A. INSTRUCTIONS

1. All questions must be answered, and all requested information supplied in the order set forth in the application.

2. Consistent with the Cable Act, there is no requirement under this RFRP that Applicant submit a proposal for video programming or other information services

A form is included in this section regarding such services in the event any are proposed. If Applicant makes no such service proposals, it may return blank pages. The application must be verified by signing and returning the Application Form and Affidavit included in this Section V.

3. Applicant may use the forms provided. Where that is impractical, forms of Applicant's design may be substituted if all requested information is clearly displayed.

In order to facilitate review of Applicant's proposal, Applicant should follow the format and order of the RFRP. Applicant is required to insert in its proposal the pertinent RFRP sections (in their original color) before applicant's response to that Section of the RFRP. Applicant is urged to avoid the use of extensive attachments at the end of its proposal. Rather, applicant should endeavor to provide complete information within its response to each section.

4. Applicant should begin a new page wherever indicated. Applications shall be as concise as possible without sacrificing clarity and completeness.

5. The financial pro forma information submitted must be based upon the requirements specified in this document. If Applicant deviates from those requirements, an additional separate pro forma (which is based on the deviations and explains their impact, in detail) must be submitted.

6. Applicant must clearly differentiate between those elements in a proposal that it is willing to include in any final franchise; those which it intends to

provide through contractual agreements with others; and those which it expects to provide, but which it is not willing to commit to provide.

APPLICATION FOR A CABLE TELEVISION SYSTEM FRANCHISE IN THE CITY OF ST. LOUIS, MISSOURI

B. IDENTIFICATION & VERIFICATION OF APPLICANT

Name of Applicant:

Address:

Telephone:

Fax:

Provide name and contact information for a principal to whom inquiries should be made:

Name:

Address:

Telephone:

Fax:

E-mail:

Provide name and contact information for a principal authorized to negotiate with City on behalf of Applicant:

Name:

Address:

Telephone:

Fax:

E-mail:

APPLICATION FOR A CABLE TELEVISION SYSTEM FRANCHISE IN THE CITY OF ST. LOUIS, MISSOURI

C. APPLICANT'S AFFIDAVIT

1. This application is submitted in response to the Request for Renewal Proposal issued by the City of St. Louis, Missouri.

2. The Applicant attests that it has reviewed and checked the information presented, as necessary to determine its accuracy, and represents that it is true, accurate and complete, as required to ensure that the representations explicitly or implicitly made are not misleading.

3. The Applicant has reviewed applicable City law, and understands that any commitments it has made in this application are subject thereto.

4. The Applicant recognizes that all representations are binding on it and that failure to adhere to any such representations may, at the City's option, result in revocation of any franchise that may be granted as a consequence of and in reliance upon this application.

5. The Applicant hereby gives the City permission to inquire into the legal, technical, financial and other qualifications of the Applicant by contacting any persons or organizations named herein as references, or by any other appropriate and lawful means.

6. The undersigned has been duly authorized to make these representations on behalf of the Applicant.

Firm Name:

Affiant's Signature:

Official Position:

Date:

Attest:

APPLICATION FOR A CABLE TELEVISION SYSTEM FRANCHISE IN THE CITY OF ST. LOUIS, MISSOURI

D. EXECUTIVE SUMMARY OF PROPOSAL

The purpose of this section is to provide the reader with an understandable overview of the proposal, not to discuss details which will be covered elsewhere in the application forms.

Please limit responses to a maximum of fifteen pages (double-spaced).

Each Applicant should present a clear and concise narrative description of the cable television system it proposes to provide. The following subject areas must be covered in the Executive Summary:

Overview of proposal;

Ownership and management of system;

Financial commitments;

System design and construction;

Program services and other service(s) (if proposed);

Public, educational and governmental access;

Institutional network (including network characteristics and capabilities);

The rates Applicant will be able to charge in light of its proposal, as an indication of the costs involved; and Other.

FORM I.
BACKGROUND AND LEGAL QUALIFICATIONS

FORM I-A. LEGAL QUALIFICATIONS.

The term "Applicant" as used in the questions below refers to: the Applicant; its principals; any entity which owns or controls, is owned or controlled by, or is under common ownership with the Applicant; and any entity which is expected to control or be responsible for, through any arrangement, the management and operation of the cable system serving the City. The Applicant

need not report any case or proceeding where final judgment was rendered ten years or more prior to the date this RFRP was issued. Additionally, the Applicant need not report any franchise revocation which occurred ten years or more prior to the date this RFRP was issued.

1. Applicant shall answer the following questions "yes" or "no."

a. Is the Applicant authorized under Missouri law to operate a business, including a cable television business, in the State?
____ Yes _____No

b. Does the Applicant hold all federal and state licenses required for the operation of the system?
____ Yes _____No

c. Does federal law prohibit the Applicant from holding the franchise?
____ Yes _____No

d. Has the Applicant been found by a court or other entity of competent jurisdiction to have violated state or federal laws or regulations regarding, or to have engaged in acts which constitute:

(I) discrimination on the basis of race, sex or religion or any other prohibited ground;
____ Yes _____No

(ii) fraud; embezzlement; tax evasion; bribery; extortion;
____ Yes _____No

(iii) jury tampering; obstruction of justice (or other misconduct affecting public or judicial officers' performance of their official duties);
____ Yes _____No

(iv) false or misleading advertising;
____ Yes _____No

(v) perjury;
____ Yes _____No

(vi) violations of laws prohibiting anticompetitive conduct or unfair trade practices (including, but not limited to, violations of the Sherman Act and state consumer protection laws); or
____ Yes _____No

(vii) racketeering or conspiracy to commit any of the foregoing offenses?
____ Yes _____No

e. Has the Applicant ever had a franchise or FCC license revoked for cause where the revoked franchise or license was not reinstated?
____ Yes _____No

f. Has the Applicant ever been found by a court or other entity of competent jurisdiction to have

(I) presented misleading statements,
____ Yes _____No

(ii) engaged in fraudulent conduct or
____ Yes _____No

(iii) otherwise violated applicable law?
____ Yes _____No

g. Has any local franchising authority denied a previous request for franchise or renewal submitted by the Applicant?
____ Yes _____No

h. Has any Local Franchise Authority sued Applicant over any matter relating to franchise or renewal performance or proceedings?
____ Yes _____No

I. Has Applicant sued any Local Franchise Authority over any matter relating to franchise or renewal decisions, requirements, performance, or proceedings?
____ Yes _____No

2. If the answer to any of questions 1(d)-(f) above is "yes," specifically describe the facts and circumstances concerning the acts or omissions which led to the decisions, revocation, or findings specified in questions 1(d)-(f). Identify with specificity each case, revocation, or finding which led the Applicant to respond affirmatively to questions 1(d)-(f). If the Applicant believes the acts or omissions described in response to 1(d)-(f) should not be considered in determining whether to grant or deny it a franchise, it shall explain in detail the basis for this contention. In reviewing the information, the City shall consider:

facts and circumstances which show that the acts or omissions are unrelated to the consideration of the Applicant's willingness to operate a cable television system in accordance with lawful requirements; whether the Applicant has fully corrected all harms which flowed from the act or omission; whether the act or omission did not involve principals of the Applicant; and whether the Applicant has taken adequate steps to ensure that the act or omission will not recur. Particular weight will be given to any failure to correct harms flowing from any past misconduct.

3. If the answer to questions 1(g) is "yes," state when the request for a franchise was denied, by which Franchise Authority, and under what name the Applicant submitted the application.

4. If the answer to questions 1(h) and 1(I) is ﷺyesﷺ, provide a detailed list of court proceedings, initiation date and location of proceeding, parties to the proceeding, specifying whether open or concluded, the nature and outcome of the suit.

NEED TO ELABORATE ON FAILURE TO REVEAL< OR WEIGHT GIVEN FORM I-B. APPLICANT'S HOLDINGS AND PRESENT SUBSCRIBER RATES

1. Please list all present holdings (franchises and systems) in which the Applicant or any principal* owns 3 percent or more of equity interest. (If additional pages are needed, please reproduce this form). An Applicant that already holds a franchise with the City of St. Louis need only list (1) systems where the franchise was renewed in the last five years;

(2) systems now being upgraded or rebuilt; and

(3) systems where the franchise is scheduled to expire in the next three years.

(4) systems within 50 miles of the City system (i.e. Metropolitan area)

Location of System

Date of Most Recent Franchise Award

Date of Franchise Expiration

Total Plant Miles of System

Date First Subscribers Served**

Date Construction Completed***

Percentage of System Ownership Held

Holder of Controlling Ownership Interest

Current Rates Number of Channels BSTCPST

Name Address and Phone Number of Local Franchise Officials Responsible for Cable Operations

* For purposes of this form, "principal" means any officer or director of Applicant, and any person, firm, corporation, subsidiary, joint venture or other entity, that owns or controls 5 percent or more of the voting stock (or any equivalent voting interest of a partnership or joint venture) of Applicant.

** In a case of upgrade or rebuild, date first subscriber served by upgraded or rebuilt system.

*** In case of upgrade or rebuild, date upgrade or rebuild completed.

FORM I-C. APPLICANT'S OTHER HOLDINGS

Please list other investments or affiliations, direct or indirect, with any media, entertainment or telecommunications enterprise in which the Applicant or any principal owns 3 percent or more of equity interest.

FORM I-D. FORMER FRANCHISES

The Applicant and any principal* shall list every community where it has received a cable television franchise or operated a cable system without a franchise, and subsequently disposed of all or a majority of its interest. (If additional pages are needed, please reproduce this form).

Name of System Community Date of Franchise Award Date of FranchiseDisposition Reason and Manner of Disposition

FORM II.
OWNERSHIP DISCLOSURE

FORM II-A. OWNERSHIP INFORMATION

1. Organizational Structure

Sole Proprietorship	Joint Venture	Unincorporated	Other
Partnership	Corporation	Association	(explain)

If Corporation, List Officers:

President

Vice President

Secretary

Treasurer

If Sole Proprietorship:

Owner

If Partnership:

General Partners

Limited Partners (if applicable)

2. Business Structure

If the Applicant is a corporation, please list all members of the Board of Directors, their principal affiliations and their addresses. If the Applicant is a partnership, please list all members of any governing body or management committee, their principal affiliations and their addresses.

FORM II-B. OWNERSHIP DISCLOSURES

Applicants that do not comply with these disclosure requirements may be eliminated from consideration. (Answers may be provided on separate sheets following each page).

Please fully disclose:

(1) the names and positions of all City officers and employees known to the Applicant to have any interest in the entity submitting the application, and the extent of such interest;

(2) the names of all officers of the Applicant (if not fully disclosed on Form II.A.) and the names and last-known addresses of all persons who have acted as attorney, broker, consultant, or agent of the Applicant with respect to the franchise application;

FORM II-B. OWNERSHIP DISCLOSURES

Please fully disclose:

(3) the names and last-known addresses of all persons who own or control any interest in the Applicant; in the case of a partnership, joint venture or syndicate, the names and last-known addresses of all partners or participants; in the case of a corporation having fewer than two hundred stockholders, the names and last-known addresses of all stockholders; in the case of a corporation having more than two hundred stockholders, the names and last-known addresses of two hundred stockholders who own or control the greatest percentage of voting and ownership interest in the Applicant, except that corporations having more than two thousand stockholders, and whose stock is traded on a national stock exchange, shall disclose only those stockholders owning a stock interest of one percent or more; provided, however, that if any partner or stockholder so identified is other than an individual, the name and last-known addresses of all persons who own or control any interest in such person shall be stated; provided, further, that if any statement of ownership discloses an interest held by a person other than an individual, a similar disclosure statement shall be provided. For purposes of this disclosure requirement, a person holding any ownership interest as trustee shall not be deemed to be an individual, and all persons who may have any interest under the trust, whether vested or contingent, shall be included in the required statements;

FORM II-B. OWNERSHIP DISCLOSURES

Please fully disclose:

(4) the names and last known addresses of all holders of debt of the Applicant, other than stockholders or suppliers of goods and services paid on a current account, in excess of five thousand dollars ($5000) or one percent of the total outstanding indebtedness of the Applicant, whichever is lesser.

FORM II-B. OWNERSHIP DISCLOSURES

Please fully disclose:

(5) the name and position of each City officer, employee or immediate family member of any officer or employee to whom or on behalf of whom the Applicant or any person identified in paragraph (3), above, has made any gift, donation or political contribution of one hundred dollars ($100) or more within three years preceding the filing of the franchise application, the name of the donor, and the amount or value of the gift, donation or political contribution.

FORM II-C. STOCK INFORMATION

Please answer the following if the Applicant is a corporation.

1. Is the Applicant a publicly held corporation as defined by the rules and regulations of the Securities and Exchange Commission?

[ ] Yes [ ] No

2. Stock of Corporation:

ClassofStock ParValue VoteperShare No. SharesAuthorized No. SharesIssued No.SharesSubscribed Total No.Stockholders

3. Does the Applicant have any other obligations or securities authorized or outstanding which bear voting rights either absolutely or upon any contingency?

[ ] Yes [ ] No

If ﷺYesﷺ, submit a statement of (a) the nature of such securities, (b) the face or par value, ﷺ the number of units authorized, (d) the number of units issued and outstanding, (e) the number of units, if any, proposed to be issued, and (f) the conditions of contingency upon which securities may be voted.

4. Is the Applicant corporation directly or indirectly controlled by another corporation or legal entity?

[ ] Yes [ ] No

If "yes," please explain.

5. Nationality and State of Incorporation:

_____

FORM II-D. OWNERSHIP DISCLOSURE

The Applicant (including all shareholders and parties with any financial interest in the Applicant) must fully disclose all agreements and understandings with any person, firm, group, association or corporation with respect to the City of St.Louis franchises and the City cable system. This includes agreements between local investors and national companies. Failure to reveal such agreements will be considered withholding of pertinent information and will be considered cause to withhold or revoke award of any franchise.

1. Please append copies of any written agreements made regarding the ownership or control of the proposed system.

___ Copies are appended

___ There are no written agreements regarding ownership or control of system

2. Please outline any oral agreements or understandings regarding the ownership or control of the proposed system. (Attach additional sheets as necessary)

FORM II-E. LIMITED PARTNERSHIP

If Applicant is a limited partnership, please describe the structure of the partnership and identify the general and limited partners and their principals.

If Applicant is not a limited partnership, please write "NOT APPLICABLE"

FORM II-F. ADDITIONAL OWNERSHIP DISCLOSURES

If, in response to Forms II.B (Ownership Disclosures) or II.E (Limited Partnership), the Applicant listed other partnerships or corporations that are owned, controlled or managed by another corporation or partnership, then additional forms for II.B and II.E shall be provided for such corporations and partnerships on this Form II-F.

The same shall be done for each partnership or corporation identified in these additional forms and so on until the ultimate parents of all such entities are identified. Information previously provided on Form II.B need not be repeated here.

FORM III.
FINANCIAL QUALIFICATIONS AND INFORMATION

An important element of any response to this RFRP is an adequate demonstration of financial capability to perform.

Clear, complete and documented financial information is required for the City to determine the qualifications of the Applicant.

FORM III-A. SYSTEM FINANCING PLAN

1. Please attach a detailed description of the financing plan for any cable system construction proposed during the period covered by your response to this RFRP.

2. Please separately disclose construction costs anticipated for the franchise specified in this RFRP, for other systems owned and operated by Tele-Communications Inc. and for other systems owned and operated by Tele-Communications Inc., and its affiliates.

3. Indicate the source and amount of financing required to complete the construction in each of these categories, including internally generated funds, newly issued equity, newly issued debt, and any other sources. Identify the issuer, and the anticipated terms of any new debt and equity to be issued. In describing the terms of financing, include interest rates, collateral, guarantees, terms and conditions. Documentation must be submitted which corroborates the commitment of funds (where applicable) and lists the name, address, title and telephone number of the appropriate contact person for each organization involved in funding debt or equity. Copies of financing agreements are to be submitted or otherwise made available for inspection at the location indicated in the Instructions.

Attach separate or additional pages as necessary following this sheet.

FORM III-B. APPLICANT'S FINANCIAL STATEMENTS

(1) (a) Please attach audited financial statements, including a statement of income, a balance sheet and a sources and uses of funds statement, together with any notes necessary to the understanding of the financial statements, for the last three fiscal years for the Applicant and any controlling entities. If audited information is not available, unaudited information is to be provided, and certified as correct by the Applicant's Chief Financial Officer.

(b) In addition, Applicant should provide separate information for any affiliate or parent company where necessary to understand the statements for the City system, or where the debt, interest or other obligations or assets of such affiliate or parent company are in any way allocated to the City system.

(2) For the last three calendar years, to the extent not provided in the statements identified above, identify:

(a) total revenues - listed separately and totaled - for

(I) service charges for each tier or type of service,

(ii) miscellaneous subscriber revenues (specify as to source)

(iii) subscriber equipment including equipment rentals to subscribers; installation, reconnection, and tier changing charges; additional outlets (including those on digital tier)

(iv) non-subscriber revenues (indicate type or source)

(b) the subscribers, listed separately, for each service tier.

(I) Basic Service Tier

(ii) Cable Programming Services Tier

(iii) Digital Tier

- fixed system costs (i.e. those not varying with subscriber volume)

(d) semi-variable costs (including a description of conditions according to which they vary)

(e) pure variable costs, which increase with subscriber counts, or revenue per subscriber.

(3) Please identify the existing and expected financial obligations of the Applicant and its financial guarantors over the next five years. Specifically identify those obligations or expected obligations within other franchise areas.

Attach pages as necessary following this sheet.

FORM III-C. APPLICANT'S AUDITOR

Each Applicant shall provide the name, address, title and telephone number of an appropriate contact person for any outside audit firm utilized by the Applicant.

FORM III-D. FINANCIAL GOALS

Attach a brief narrative describing the Applicant's financial goals for this cable system. If the system does not meet these goals, describe how the Applicant will improve financial performance. Any discussion should include, at a minimum, operating assumptions such as rate increases, interest rates, sources of revenue, marketing, and operational changes.

Include in the narrative your historical rates of return on investment for each system, your target rates of return on new cable system investments, and your target rate of return for your investment in the northern and southern systems. Explain how these rates were arrived at, and the methodology that you will use in comparing the actual results to these targets.

Attach separate pages as necessary.

FORM III-E. LITIGATION

Is the Applicant or any controlling entity currently in litigation (including any matters pending before the FCC)?

[ ] Yes [ ] No

If ?yes?, please describe the venue, parties, situation and estimate the potential financial impact on the Applicant or the controlling entity.

FORM III-F. PRO FORMA FINANCIAL PROJECTIONS

The Applicant shall furnish tables approximately following the format below and shall provide the requested pro forma projections specified in this RFRP for the proposed franchise term (see Form XI), assuming franchise specified in this RFRP is awarded on January 1, 2000.

1. If the system's assumed revenues or expenses will reflect an allocation of assumed expenses or revenues for some other entity, including, but not limited to, overhead allocations and management fees, pro forma projections for such other entity should be provided as well.

2. The pro forma projections should include approximately the same line-item level of detail indicated on the attached forms, but particular details of presentation may differ if the Applicant believes that alternatives are more appropriate given its internal accounting practices.

3. Key assumptions supporting the projections should be documented and submitted as notes to the pro formas.

Financial pro formas must be based upon RFRP requirements and models. If the application deviates from those requirements and models, submit separate and additional pro formas showing the financial impact of each difference.

Please provide the following financial projections for each year of a proposed 5 year franchise term.

FORM III-F.

1. REVENUES PRO FORMA FINANCIAL PROJECTIONS

Attach information explaining the assumptions upon which these projections are made.

III-F. 1. REVENUES

Specify Year

Households in franchise area:total homes passed

Beginning subscribersNet subscriber growthPenetration %

New subscrbr connectsHousehold reconnectsSubscriber disconnects

Number of BST subsNumber of subscribers for other tiers
Number of premium subscribersNumber of pay-per-view units sold

REVENUE PER SUBSCRIBER:

BasicCPST
DigitalOther Tiers
Premium

Number of subscribers for each premium service offeredMonthly rate for each premium service offered

Pay-per-view
Converter/remotes
Extra outlets
Installation
FM / DMX / Music
Other (late fees etc)

TOTAL

REVENUE ANNUAL $TOTAL

Basic Tier (BST)Expanded(CPST)
Digital TierOther Tiers
Premium
Pay-per-view
Converter/remotes
Extra outlets
Installation
FM / DMX / Audio
Advertising
Home Shopping
Mailing Stuffers
Other***

TOTALREVENUES

FORM III-F.

2. STATEMENT OF INCOME PRO FORMA FINANCIAL PROJECTIONS
Attach information explaining the assumptions upon which these projections are made. III-F. 2 STATEMENT OF INCOME

Specify Year Year Year Year Year Year

REVENUES
OPERATING EXPENSES
Programming
Payroll
Technical & Plant
Marketing
Administration & GeneralOverhead
Other Operating Expenses

TOTAL OPERATING EXPENSES

Operating Income

Less Depreciation AmortizationInterest on Debt to Corporate Parent / or related entities Other Interest Other Expenses/(Income) Net Income Before Income Taxes Income TaxesIncome Tax Credit

AFTER-TAX NETINCOME

FORM III-F 3. BALANCE SHEET PRO FORMA FINANCIAL PROJECTIONS

Attach information explaining the assumptions upon which these projections are made.

III-F 3. BALANCE SHEET

Specify Year Year Year Year Year Year

CURRENT ASSETS
Cash
Cash Equivalents (specify)
Accounts Receivable
Inventory
Prepaid Expenses

Other (specify)
SUB-TOTAL
Property, Plant & Equipment
Land
Buildings
Leasehold Improvement, Furniture, Fixtures
Cable Plant
Equipment
Other (specify)
Less Accumulated Depreciation
Sub-Total
Other Assets (specify)

TOTAL ASSETS

CURRENT LIABILITIES
Accounts Payable
Accrued Liabilities
Subscrbr Deposits& Pre-payments
Notes Payable + Corporate Parent
Notes Payable + Other
Other (specify)
Sub-Total
Long-term Debt + Corporate Parent
Long-term Debt + Other
Other Liabilities (specify)
Stockholders' Equity
Sub-total

TOTAL LIABILITY AND EQUITY

As part of your response to this Form, please provide the historical financial data requested below in the same format used in your response to Form III-F.

FORM III-F. 4. SOURCES AND USES OF FUNDS PRO FORMA FINANCIAL PROJECTIONS

Attach information explaining the assumptions upon which these projections are made.

III-F.4 SOURCES AND USES OF FUNDS

Specify Year Year 1 Year 2 Year 3 Year 4 Year 5

SOURCES OF FUNDS

Proceeds from Issuance of New Stock
Debt + Corporate Parent
Debt + Other
Increases in current liabilities
Other (specify)

TOTAL

USES OF FUNDS
Capital expenditures
Operating expenses
Less non-cash expenses (specify)
Interest payment to corporate parent and related entities
Other interest payments
Income taxes (cash payments)
Debt repayments
Dividends or partner distributions
Increase in current non-cash assets
Other (specify)

TOTAL

Net change in cash
Beginning cash
Ending cash

FORM III-F.5. ANTICIPATED CAPITAL EXPENDITURE PRO FORMA FINANCIAL PROJECTIONS

Attach information explaining the assumptions upon which these projections are made.

FORM III-F.5. ANTICIPATED CAPITAL EXPENDITURE

Specify Year Year 1 Year 2 Year 3 Year 4 Year 5

ANTENNAS, TOWERS, MICROWAVE FACILITIES HEADEND HUBS/NODES CABLE PLANT SUBSCRIBER NETWORK

Distribution Plant
Rebuild/Upgrade of Distribution Plant
Extensions
Replacement
Subscriber drops
Other (specify)

CABLE PLANT INSTITUTIONL NETWORK
Distribution Plant
Rebuild/Upgrade of Distribution Plant
Extensions
Replacement
Drops
Interface Equipment
Other -Specify

CONVERTERS
New
Replacement

BUILDINGS & LAND LEASEHOLD IMPROVEMNT FURNITURE & FIXTURES PROGRAM ORIGINATION

Local Origination
P/C AccessFacility
P/C Access Equipment
Ed Access
Other (specify)
Other (specify)
Other (specify)

TEST EQUIPMENT, SPARES, TOOLS VEHICLES

DATA PROCESSING EQUIPMENT

OTHER (Specify)

CAPITALIZED OVERHEAD

TOTAL

TOTAL CAPITAL EXPENDITURES - 5 YEARS =

FORM III-F. 6. DEPRECIATION SCHEDULE PRO FORMA FINANCIAL PROJECTIONS

Attach information explaining the assumptions upon which these projections are made.
III-F. 6 DEPRECIATION SCHEDULE

Specify Year Year 1 Year 2 Year 3 Year 4 Year 5

ANTENNAS, TOWERS, MICROWAVE FACILITIES HEADEND HUBS/NODES CABLE PLANT SUBSCRIBER NETWORK

Distribution Plant
Rebuild/Upgrade of Distribution Plant
Extensions
Replacement
Subscriber drops
Other (specify)

CABLE PLANT INSTITUTIONL NETWORK
Distribution Plant
Rebuild/Upgrade of Distribution Plant
Extensions
Replacement
Drops
Interface Equipment
Other -Specify

CONVERTERS

New
Replacement

BUILDINGS & LAND LEASEHOLD IMPROVEMNT FURNITURE & FIXTURES PROGRAM ORIGINATION
Local Origination
P/C AccessFacility

P/C Access Equipment
Ed Access
Other (specify)
Other (specify)
Other (specify)

TEST EQUIP-MENT, SPARES, TOOLS VEHICLES

DATA PROCESSING EQUIPMENT

OTHER (Specify)

CAPITALIZED OVERHEAD

TOTAL

(Form III-F. 7. 7. PROGRAMMING EXPENSES PRO FORMA FINANCIAL PROJECTIONS

Attach information explaining the assumptions upon which these projections are made.

III-F. 7. .PROGRAMMING EXPENSES

Specify Year Year 1 Year 2 Year 3 Year 4 Year 5

Salaries
Payroll Taxes
Overtime
Benefits
Buildings/Rent
Maintenance
Vehicle Expense
Basic Program Expenses BST
Expanded Basic Programming Expenses CPST
Digital TierProgram Expense
Premium Programming Expenses
Royalty Payments

Program Guides
Other Programming Expenses (specify)

TOTALEXPENSE

Form III-F. 8. TECHNICAL AND PLANT OPERATIONS PRO FORMA FINANCIAL PROJECTIONS

Attach information explaining the assumptions upon which these projections are made.

(Include data for both the subscriber network and the institutional network).

III-F. 8. TECHNICAL AND PLANT OPERATIONS

Specify Year Year 1 Year 2 Year 3 Year 4 Year 5

Salaries
Payroll Taxes
Overtime
Benefits
Contract Labor
Buildings/Rent
Maintenance
Vehicle Expense
Repairs & Maintenance
Pole Rentals
System Power
Small Tools & Test Equipment
Other Plant Expenses (specify)

TOTAL

PRO FORMA FINANCIAL PROJECTIONS Form III-F. 9. MARKETING

Attach information explaining the assumptions upon which these projections are made.

III-F. 9. MARKETING

Specify Year Year 1 Year 2 Year 3 Year 4 Year 5

Salaries

Payroll Taxes
Overtime
Benefits
Commissions
Outside Marketing
Buildings/Rent
Maintenance
Vehicle Expense
Advertising & Promotion
Other Marketing Expenses (specify)

TOTAL

PRO FORMA FINANCIAL PROJECTIONS Form III-F. 10.
ADMINISTRATIVE AND GENERAL

Attach information explaining the assumptions upon which these projections are made.

III-F. 10. ADMINISTRATIVE AND GENERAL

Specify Year Year 1 Year 2 Year 3 Year 4 Year 5

Salaries
Payroll Taxes
Overtime
Benefits
Data Processing
Buildings/Rent
Maintenance
Vehicle Expense
Utilities Light / AC Power
Utilities - Heat
Utilities -Phone
State/ Local Taxes
Franchise Fee
Postage
Stationery & Supplies
Training
Travel & Entertainment
Professional Services

Services Purchased
Insurance (cash outlay)
Bad Debts
License & Permit Fees
Management Fee:By RecipientBy Parent
Corporate Allocation
Other (specify)

TOTAL

PRO FORMA FINANCIAL PROJECTIONS Form III-F. 11. OTHER OPERATING EXPENSES (specify category and amount)

Attach information explaining the assumptions upon which these projections are made.

III-F. 11. OTHER OPERATING EXPENSES (specify category and amount)

Specify Year Year 1 Year 2 Year 3 Year 4 Year 5

TOTAL

PRO FORMA FINANCIAL PROJECTIONS Form III-F. 12. EMPLOYEE ESTIMATES

Attach information explaining the assumptions upon which these projections are made.

1. List : by category, by all titles used at TCI , and by year the total estimated number of employees that will be employed to provide service in the franchise area and system.

EMPLOYEES, BY CATEGORY

Specify Year Year 1 Year 2 Year 3 Year 4 Year 5

TECHNICAL AND PLANT

Plant ManagerSupervisors (list titles)Trunk TechniciansInstallersService TechniciansDisconnections/RetrievalsOther (specify)

CUSTOMER SERVICE
Customer Service RepresentativesCustomer Service SupervisorsCustomer Service Manager(s)

ADMINISTRATIVE / GENERAL

Data processing & BillingsSystem Manager(s)Other (specify)

OTHER CATEGORIES (specify)

2. If these employees will also provide service to other franchise areas, identify these areas and the number of subscribers in each.

3. Identify any plans to increase the number of employees during any rebuild or upgrade of a system serving the franchise area.

FORM IV.

GENERAL QUESTIONS REGARDING

TECHNICAL QUALIFICATIONS

The Applicant should submit information responsive to the questions below, and such other information as may show that the Applicant is capable of constructing and operating a system which, consistent with the requirements of this RFRP and the Cable Act, meets the needs and interests of the community.

Attach additional sheets as necessary to answer each question.

TECHNICAL QUALIFICATIONS
FORM IV-A. PREVIOUS EXPERIENCE

Has the Applicant ever operated a cable system of the type that it proposes to provide in accordance with this RFRP?

If the answer is "yes," please describe that previous experience by identifying the location of the system(s) and a person who can answer additional questions regarding that system. If the answer is "no," please explain why the Applicant believes it will be able to successfully operate such a system in the City of St. Louis..

TECHNICAL QUALIFICATIONS

FORM IV-B.1. MANAGEMENT OF ACCESS FACILITIES

In evaluating the response to the questions below and the forms which follow, the City will be attempting to: a) determine whether the Applicant is proposing that the PEG access resources it intends to provide will continue to be managed by an entity which has been able (in cases where it has been responsible for access) or is likely to be able to bring to bear the skills required for successful management of access resources.

b) assess whether the access proposed by the operator will meet or exceed current operations and obligations, or will be subject to change, expansion or reduction of access operations and opportunities.

1. If the Applicant proposes to manage the provision of PEG access facilities, equipment and services itself, or through use of an independent contractor designee, please state whether the Applicant or its designee has ever directly managed the provision of access facilities, equipment or services comparable to those it proposes to provide in the City.
____ YES ___ NO

2. Does Applicant intend to directly manage the provision of PEG ACCESS facilities, services and equipment it proposes to provide in accordance with this RFRP?
____ YES ____ NO

Does Applicant intend to directly manage the provision of LEASED ACCESS facilities, services and equipment it proposes to provide in accordance with this RFRP?
____ YES ____ NO

If the answer is "no," please identify the entity or entities that would be responsible for managing the provision of access services, facilities or equipment;

Public / Community _____

Educational - Elementary/Secondary
_____

Educational - Higher _____

Government _____

Leased _____

TECHNICAL QUALIFICATIONS

FORM IV-B.1. MANAGEMENT OF ACCESS FACILITIES

3. Indicate Applicant's timetable for reaching an agreement with such entities and the general nature of such agreements (i.e. contract, programming agreement, channel capacity only, etc).

4. State how the Applicant will ensure that the PEG entity is qualified to manage the provision of access services, facilities and equipment. Describe below why Applicant believes it (or its designee) is technically qualified to manage the access facilities, equipment or services proposed by describing the skills it believes are required to successfully manage the access resources and how it or its (designee) will supply those skills.

TECHNICAL QUALIFICATIONS

FORM IV.B.2 SUMMARY OF PUBLIC/ COMMUNITY ACCESS OPERATIONS

Please provide information regarding past and proposed operations.

1. CHANNELS & RESOURCES PAST PROPOSED

(a)

Public/Local Access Manager:
Contact Person:
Telephone #:

Public Leased Non-profit LO Public Leased Non-profitLO

(b)

Type of Local Programming Services ___ ___ ___ ___ ___ ___
Other (Please Describe)
(list only those managed by entity)

(c).

Number of Channels by Type Programmed ___ ___ ___ ___ ___ ___
Other (Please Describe)

(d).

Number of Paid Staff _____ _____ _____ _____
Full-Time Part-Time Full-Time Part-Time

(e)

Allocation of Above Listed Staff-Time _____ ____ _____ _____

by Type of Service Provided Public Access Community Public Access Community

(i.e., 2.5 PA/ 1.5 C/ LO)

(f).

Estimated annual hours - volunteer staff _____ _____

(g).

Overview of Funding Sources and Levels for FY 1998 FY 1999

Revenue Sources: $ $

Cable Company

Government

Contributions

Grants

Other Income and Services

_____ _____
Total Operating Budget $ $

(h)

Total Value of Production Equipment $ $

2. PROGRAMMING STATISTICS - 199__ (specify) 199___

Two Most Recent Years

Public Access

(a) Channel Number on System

(b) Total number of hours cablecast

(including Replays, excluding CharacterGeneration)

 Number of locally produced 1st run hours

(d) Number of imported program 1st run hours

Community / Local Origination

(e) Channel Number on System

(f) Total number of hourscablecast

(including replays, excluding character generation)

(g) Number of locally produced 1st run hours

(h) Number of imported program 1st run hours

Please repeat on an attached sheet for each additional local programming channel managed for the reported franchise area.

3. ACCESS EQUIPMENT USE

Do you have information which compares the number of hours of available equipment time to the number of hours of use by category of equipment?

Yes No

If yes, please provide information, as follows, for the two most recent years of operation (Specify)

(a) Studio(s) 199__ 199___`

Number of studio(s)

Hours available - per studio for access

Hours used per week - for access

Comments:

(b) Editing Systems

Number of editing systems

Hours available - for access purposes

Hours used - for access

Comments:

- Cameras

Portable - Single Camera

Number of units

Hours available - per unit for access purposes

Hours used - per unit for access

Portable - Multiple Camera

Number of units

Hours available - per unit for access

Hours used - per unit for access

Comments:

4. TRAINING SERVICES PROVIDED

(a) Do you provide training in video skills? Yes No

If answered "yes," please provide the following information to extent available.

(b) List Training Classes offered in the two most recent years of operation, the length of each class (the number of sessions and total hours) the average number of enrollees per class, and the total number of people trained in 1998 and 1999.

Class Sessions/Hours PerClass # of times offered Average # Enrollees Per Class Total # of People Trained

a.

b.

c.

d.

e.

f.

g.

□ Please provide a copy of your most recent operating policies and procedures.

5. ACCESS USERS & SERVICES

(a) Please estimate the number of organizations, schools, and other participants which have used the access programming resources and services in the two most recent years of operation. (Specify years)

___ 19____ _____ 19____

(b) Please briefly describe other access services provided, such as out-reach, newsletters, program promotion, etc. and attach a copy of examples of such services (such as a newsletter), as available and appropriate.

FORM V.

PROPOSAL FOR SYSTEM DESIGN AND CONSTRUCTION

Where necessary, please attach sheets as necessary to respond to the following questions or requests:

FORM V-A. FRANCHISE AREA CONSTRUCTION.

1. Describe the schedule for any new, rebuild or upgrade construction in the City of St. Louis.

Attach as an appendix to this application a map indicating the areas to be constructed or built in each three month period from the beginning of construction to completion of construction. Such map shall be provided both in hardcopy (at a scale so that the map representation is no smaller than 500 feet per inch) and in a CAD or other electronic format approved by the City.

Appendix _____

2. Describe in detail the line extension policy proposed for access to the system within the City, and in any new or redeveloped residential areas that may be added in the City in the future.

3. Attach a timetable showing the percentage of occupied dwelling units within the City that will be capable of receiving upgraded cable service at the end of each 3 month period following the beginning of any construction.

4. Please state whether any old cable plant to be replaced under Applicant's plans, both underground and aerial, would be removed or abandoned in place, and explain in detail the potential cost of such removal.

FORM V-B. CONSTRUCTION OR REBUILD SCHEDULE BY AREA

Referencing census tract data, show the proposed schedule of any system construction by census tracts. Information should be provided for the entire City.

Month Census Tract Numbers

3

6

9

12

15

18

21

24

27

NOTE: Month 1 begins on the date the franchise is awarded, or in the case of an upgrade already initiated, date that construction was begun.

FORM V-C. NEW CONSTRUCTION OR REBUILD SCHEDULE BY MILEAGE

1. Please complete the following chart.

Category Month 3 Month 6 Month 9 Month 12 Month 15 Month 18 Month21 Month24

a. Aerial plant miles

b. Under ground plant miles w/ conduit

c. Underground plant miles w/o conduit

d. Total plant miles (for month specified)

e. Cumulative plant miles completed (inception to date)

f. Cumulative percent completed (inception to date)

NOTE:Month 1 begins on the date the franchise is awarded, or in the case of an upgrade already initiated, date that construction was begun.

2. Total Construction Period: months from date franchise is granted or construction is begun, whichever is earlier.

3. Submit a large-scale map for the subscriber network and the institutional network which identifies the locations of proposed (or current) headend

facilities, hubs or nodes, antennas, and microwave facilities. Label map in reference to this Form and Question

This map shall be provided both in hardcopy (at a scale so that the map representation is no smaller than 500 feet per inch) and in a CAD or other electronic format approved by the City.

4. In addition, Applicant shall be required to submit a list of these locations in an electronic database form approved by the City at the beginning of a new franchise term.

_____ Agree _____ Object

FORM V-D. CONSTRUCTION PRACTICES

1. SYSTEM CONSTRUCTION

a. Will construction be undertaken by contractors? [ ] Yes [ ] No

If "yes:"

(b) (1) Have the contractors been selected? ** [ ] Yes [ ] No

(2) Who are the contractors? (List name & address of each).

2. Discuss the availability of work crews and equipment to ensure compliance with the construction schedule. Detail outstanding agreements with construction companies or equipment suppliers. Supply copies of any commitments regarding this particular project.

(Attach additional pages as necessary.)

3. List or describe the standards to be followed regarding tower construction, marking and lighting.

4. List construction codes which will be followed, and the steps you will take to comply with them.

5. (a) Do you have a manual of construction practices to be followed by construction crews?

[ ] Yes [ ] No

(b) If "yes," please indicate Title and Issuer of Manual below.

□ When was your manual of construction practices last updated?

(d) Attach a copy of the manual as an appendix to this application.

(Appendix #_____)

.6. Describe how the construction manual is made available to its contractors by Applicant, and steps Applicant takes to ensure quality control and compliance with the mandated practices.

FORM V-E. SYSTEM DESIGN AND CHANNEL CAPACITY

The City considers system design and channel capacity to be an important part of any application, characterizing the facilities and equipment to be provided by the Applicant.

Describe the design of any system Applicant proposes to build or operate (including but not limited to the subscriber network and I-Net) and include, at minimum, the following information:

1. Channel capacity on the subscriber network

(a) Downstream:

Frequency Spectrum

Channel Capacity

Channel Capacity initially activated

Type of transmission (digital, analog)

(b) Upstream:

Frequency Spectrum

Channel Capacity

Channel Capacity initially activated

Type of transmission (digital, analog)

2. Channel capacity on the Institutional Network

(a) Number of single-mode fibers to each site (attach list) Backbone fiber count:

3 Attach (I) maps showing the distribution of fiber counts in the backbone and hubs, and

(ii) logical maps showing the fiber routing from hub sites to all user sites. Maps shall be provided both in hardcopy (at a scale so that the map representation is no smaller than 500 feet per inch) and in a CAD or electronic format approved by the City.

4. Proposed timetable for making additional downstream and upstream capacity available on both the subscriber network and the institutional network.

5. Proposed method, channel capacity, equipment, and timetable to be used to link institutional network with government access facilities and the headend and to permit routing of signals to the subscriber network from selected sites, including (but not limited to)City Hall.

6. Proposed method, channel capacity, equipment and timetable to be used to link other jurisdictional networks or facilities to the institutional network (assuming agreement of interconnected parties).

7. Describe any additional upstream system capability from

a. public or other school facilities to K-12 educational access facilities and/or the headend.

b. Higher Education or other similar programming facilities to the City headend.

c. Public and Community Access facilities to the headend.

8. Subscriber Network and I-Net Design Type

Trunk and feeder design

Number and location of hubs or node

Number of fibers (from hubs to each node; from headend to hubs)

Type of fibers (e.g., 1310 of 1550 nm optimized; single-mode or multi-mode)

Number of feeders to each node

Dark fiber in plant

Number of fibers from each hub to each I-Net location

9. Distribution system, including copper-based cable, fiber, and equipment to be used.

(Provide manufacturer, type of equipment and model number, and physical and technical specifications, and include cable, fiber, active electronics, and passive electronics).

10. Use (if any) and capabilities of converters proposed, and conditions under which converters will be made available.

Applicant should specifically indicate whether any converters used are capable of allowing subscribers to simultaneously receive one video signal, and record another. Include input capabilities, (RS-32, RJ-11, F-Connector, etc.), technical specifications including noise figures, throughput (lines of resolution).

11. Plans to operate or contract for transmission services using the following services: common carrier; Cable Television Relay Service (CARS); Multipoint Distribution Service (MDS); other (please specify).

12. Plans to operate or contract for satellite earth stations, including appropriate technical specifications (e.g., size of antenna; manufacturer of antenna; low-noise amplifier make, model number and noise figures; receiver make, and model number; standby power; etc.)

13. SERVICE LEVEL SEPARATION -- TIER ISOLATION AND PAY ISOLATION.

Describe design specifications for delivery of any pay cable services, including methods of security. If more than one service tier is to be provided, describe how lower tier subscribers will be isolated from receiving upper tiers of programming. Additionally, please explain whether converters or other terminal equipment will be necessary to receive the basic service tier.

14. Headend design and reception facilities, including make and model number of antennas, signal processors, modulators, demodulators, etc., and any plans to bring broadcast channels in over fiber or coaxial cable rather than over the air.

15. Plans for standby power at the headend, hubs/nodes, and satellite terminals. Provide the make and model number of equipment, as well as reserve capacity.

16. The type of status monitoring system to be used and extent to which it is used (converter, amplifier, node, etc.). Provide capabilities of the status monitoring system (noise, signal strength, voltage, power factor, etc.). Provide the approximate number of transponders and type of headend monitoring equipment.

17. The Emergency Alert System proposed, including: make and model numbers of equipment;

whether EA system will override all audio and video channels on all tiers of cable system;

how the EA system will be activated and from what locations.

18. The type of audio leveling equipment to be used, including make, model number, and technical specifications.

19. The type(s) of channel blocking and security technologies that will be employed (e.g., interdiction, traps, scrambling).

20. Plans for two-way activation to the home, including a timetable for activation, and equipment to be used.

21. Expected performance characteristics of the subscriber network and the institutional network, including, but not limited to:

a. the specification of minimum performance standards of voice, video and data (including maximum bit error rate, carrier-to-noise, carrier to composite disturbances, hum modulation) upstream and downstream from origination points (regardless of whether the point of origin is the headend or some other location); and

b. temperature ranges under which the home subscriber network and institutional network will be designed to operate without substantial signal degradation; catastrophic failure; or irreversible performance changes.

22. Longest amplifier cascade in the system (number of amplifiers, number of miles, type of cable/fiber).

23. Provide design maps for the system. The system design shall be shown on maps using standard symbology and shall depict all electronic and physical features of cable plant. Appendix Number _____ Such maps shall be provided both in hardcopy (at a scale so that the map representation is no smaller than 500 feet per inch) with this Application and in a CAD or other electronic format approved by the City upon grant of franchise.

24. (I) Provide a cut-over plan which shows how the Applicant will minimize service disruption to subscribers during any construction. (ii) Describe plan which shows how Applicant will minimize public and private property disruption and notify subscribers prior to construction activities in their area.

25. To the extent not already explained, plans for interconnecting the cable system with other broadband communications networks in the greater Missouri and Illinois metropolitan area. The plan should show:

(1) the proposed manner in which interconnection would be accomplished; and

(2) to what extent and how the interconnect would permit transmission of information to and from the institutional network proposed by the Applicant and any other institutional network in the greater metropolitan area; and

(3) to what extent and how the interconnect will permit transmission of information to and from channels designated for PEG use on other cable systems in the metropolitan area.

26. To the extent not already explained, please give a detailed description of how Applicant will interconnect its City system with all other separately franchised areas and systems within the metropolitan area.

SYSTEM DESIGN AND CONSTRUCTION

FORM V-G. PERFORMANCE STANDARDS AND TESTING

1. Please describe the Applicant's testing program for the institutional network and the subscriber network, including a summary of procedures for initial proof of performance tests, acceptance tests, continuing tests, tests in response to

subscriber complaints, and other tests planned. Test procedures should be submitted for all parameters to be tested.

FORM V-G. PERFORMANCE STANDARDS AND TESTING

2. Please list the key technical performance standards which will be met by the institutional network and the subscriber network. Include for both the forward and reverse system any parameters for:

Bandwidth

Carrier-to-Noise Ratio

Carrier-to-Cross Modulation

Carrier-to-Composite Triple Beat

Hum

In-Channel Frequency Response

System Frequency Response

Signal Leakage

Signal Levels (peak-to-valley, variation over time)

Signal-to-Noise

Bit Error Rate

Color Tests (chrominance-luminance delay inequality)

Digital video specifications (as adopted in industry practice)

SYSTEM DESIGN AND CONSTRUCTION

FORM V-H. SYSTEM MAINTENANCE PROCEDURES

1. Identify here any corporate maintenance procedures which the Applicant proposes to follow during the term of the franchise.

Attach as Appendix #_____

2. Describe the practices and procedures proposed for routine preventive maintenance, including the type and frequency of system inspection and testing, and the number and qualifications of technical staff by category (headend, system, line, universal rep.) and service facilities.

3. Describe your procedures for the provision of continuous, uninterrupted service to subscribers during the term of franchise, for restoration of service should circumstances cause service interruption, and for co-ordination with other utilities to restore service.

FORM VI.

PUBLIC, EDUCATIONAL AND GOVERNMENT USE

FORM VI-A. PEG USE CHANNEL CAPACITY

Please describe separately and attach additional pages as needed.

1 Applicant's proposal for the number of forward/downstream channels to be provided, channel number and tier assigned, and date of availability for each PEG channel proposed or, in the alternative, the percentage of the cable system's maximum channel capacity to be provided for PEG use (including storage capacity on video and computer servers).

2. Applicant's proposal for spectrum space to be provided for reverse/upstream PEG access uses, and the manner in which the Applicant proposes to provide reverse/upstream capability from access facilities and other government locations specified by the City. This description should also delineate the specific equipment to be provided which is associated with signal transmission (i.e., modulators and demodulators).

3. Applicant's proposed method (e.g., fiber or coaxial cable) by which PEG access facilities and the headend will be linked. The description should include the channel capacity in both forward and reverse directions to be provided between the locations.

PUBLIC, EDUCATIONAL AND GOVERNMENT USE

FORM VI-B. ACCESS MANAGEMENT

1. Describe the manner in which the Applicant proposes to cooperate and coordinate with the City Communications Division, Double Helix Television,

St. Louis Board of Education, the Higher Education Channel or any other designated/successor PEG access management entity.

FORM VI-C. PUBLIC/COMMUNITY ACCESS FACILITY and EQUIPMENT

1. How much does the Applicant propose to contribute in capital funds for and in support of facilities or equipment for public and community access (1) above and beyond any costs associated with constructing the cable system; and (2) above and beyond the franchise fee, and (3) above and beyond access operating support?

2. If the Applicant proposes to provide studio(s) or space facilities for public/community access:

a. Describe any access facility or facilities proposed by the applicant including: location; size (square footage); proposed layout of and type of work areas within a facility (i.e., studio, control room, editing suites, office space, etc.); availability of parking; handicapped accessibility; ability to expand in the future if needed, ownership or lease arrangements and restrictions; and any other information which will clearly and concisely describe the facility or facilities proposed for public and community use by the Applicant.

b. Describe any contemplated or proposed changes, expansions or reductions in public and community access facilities during a renewal term.

3. Describe any video equipment packages which the Applicant proposes to provide for these access purposes. The Applicant must set forth the proposed capital equipment budget for the initial equipment package and a budget outlining the replacement schedule for equipment during the term of the franchise.

4. When and in what form would the capital support identified above be provided? Applicant should specify whether it proposes to purchase and own equipment itself, for use by designated access entity, or issue capital funds in the form of cash grants to designated entity.

5. Describe the conditions under which the Applicant would agree to be bound to provide additional channels, facilities or equipment for public and community access use.

FORM VI-D. PUBLIC & COMMUNITY ACCESS SERVICES

1. Please describe the access services the Applicant proposes to provide. The Applicant should separately identify each access service it proposes to provide (e.g., training, facilitation, community outreach, production assistance, internships, etc.); who will provide the service; the staff or staffing levels devoted to these services and operations; and the hours that facilities and equipment would be available.

2. Describe any annual budget Applicant proposes for the delivery of any access services either by applicant or designated entity. Specify funding levels for current year and for each year of five year period. The Applicant should assume any such services will be provided in addition to, and not as a part of, the franchise fee paid to the City.

FORM VI-E. EDUCATIONAL ACCESS FACILITIES, EQUIPMENT and SERVICES

1. Describe Applicant's arrangement with Higher Education Channel for carriage on the cable system. Include in description any capital or operating support currently given to the HEC Access channel operations, staff or facilities, and extent to which Applicant has in the past participated, or plans in the future to participate, in such support.

2. Describe Applicant's desire to support of K-12 educational access channel operations and staff, facilities or equipment. Include in description any capital or operating support (cash or in-kind) currently offered and whether Applicant desires to continue same. Describe additional annual cash or in-kind capital or operating support Applicant desires to propose for the future with timetables for such support .

3. How much does the Applicant desire to propose to contribute for and in support of facilities or equipment for K-12 and Higher Educational Access (1) above and beyond any costs associated with constructing the cable system; and (2) above and beyond the franchise fee, and (3) above and beyond access operating support?

FORM VII. LEASED ACCESS

1. Please describe how the Applicant intends to comply with the leased access requirements of the Cable Act (including pricing policies to be followed by the Applicant and the records it will keep so that compliance can be confirmed).

2. Does the Applicant desire to propose to lease channels for other than commercial use, as that term is used in the Cable Act? If the answer is yes, the Applicant should describe the proposal.

3. Indicate number of channels, and channel position reserved or assigned for leased access and percentage of leased access channels to total channels available on all tiers.

FORM VIII. ECONOMIC DEVELOPMENT & TRAINING

1. Please describe how Applicant desires to support the use of contractors, vendors, professional services and other entities owned by minorities and women, and its commitment to foster spending patterns that reflect the business demographics of the City of St. Louis.

2. Please describe composition and hiring policies of Applicant's technical, customer service and management staff for its City Cable system, and its commitment to foster hiring patterns that reflect the demographics of the City of St. Louis.

3. Please describe Applicant's training programs and opportunities, as well as promotion policies, for current and potential employees, including management staff.

4. To the extent not already discussed elsewhere, please describe training and internship opportunities Applicant proposes to make available to non-employees, residents or students, including those for video production or other technical fields.

5. Please describe in detail the type and location of facilities used for training programs referenced in Questions 3 and 4 above. If these facilities are not located within the City of St. Louis at present, explain whether they will be in the future, and if not, why not.

Emphasis in Form VIII. Question 4. should be on opportunities available rather than on training programs to ensure technical competence of employees, which should be emphasized in Form XI-B.

FORM IX. VIDEO AND INFORMATION SERVICES

If the Applicant desires to promise to provide certain broad categories of video and other information services to subscribers as part of its proposal, or

demonstrate the manner in which it proposes to deliver a greater variety of programming, it should describe those categories here.

Please include in this discussion descriptions regarding any proposed approaches relating to affordability of services for various classes of subscribers, affordability of operator equipment needed to receive such programming, for various classes of subscribers operator equipment compatibility with subscriber equipment so as to allow full functionality of features on subscriber-owned equipment.

FORM X. INTERACTIVE SERVICES

If the Applicant desires to promise to provide certain broad categories of interactive cable services to residential and business subscribers, it should describe them here. Applicant should specifically discuss its ability to comply with any terms and conditions imposed by ordinance on such services, and estimated timetables or conditions for deployment of such services.

FORM XI. NARRATIVE SUMMARY OF RESPONSIVENESS TO LOCAL NEEDS

FORM XI-A. DESCRIPTION OF PROPOSED CABLE SYSTEM

1. Describe in narrative form your concept of the cable system (subscriber network and institutional network) proposed for the City, including anticipated system development over the life of the franchise. Describe and emphasize particularly those features which are not included in any other section of the Request for Renewal Proposals which the Applicant desires the City to consider in evaluating the proposal.

2. If the Applicant proposes to provide any other service, facility or equipment which the Applicant may wish to contend is relevant in determining whether the Applicant's proposal meets the cable related needs and interests of the community, it should describe the service, facility or equipment in complete detail; describe how it will be provided, under what circumstances and for what charge.

3. Emphasis should be given to explaining why the Applicant believes its proposal is reasonable to meet the cable related needs and interests of the community, taking into account the cost of meeting such needs and interests.

a. Is the Applicant proposing to construct a system which meets or exceeds the requirements in this RFRP?

If not, identify each and every deviation from the requirements and the entire reason for each deviation.

b. Is the Applicant proposing to construct a system which conforms to the model in this RFRP?

If not, identify each and every deviation from the model and the entire reason for each deviation.

NARRATIVE SUMMARY OF RESPONSIVENESS TO LOCAL NEEDS FORM XI-B. DESCRIPTION OF MANAGEMENT AND ORGANIZATIONAL STRUCTURE

1. Describe the proposed management structure, organizational structure and operations for the Applicant (including an organizational chart). Emphasis should be given to the proposed method for translating local needs into corporate decisions throughout the term of each franchise. Include a description of the proposed relationship between local management and the head office or parent company, if applicable.

2. Identify the supervisory personnel who will be responsible for maintaining the system and describe their technical qualifications. State whether the company will maintain the system itself or through a subcontractor. If the company, in whole or in part, will maintain the system, describe the minimum qualifications for each position involved in the maintenance of the system. If a subcontractor will maintain the system, in whole or in part, name the subcontractor, and describe its role and its qualifications.

3. Describe the training for all categories of employees, contractors and subcontractors associated with the construction, operation or maintenance of the cable system. The answer should describe:

(a) what training is given, and what materials are used for the training;

(b) whether the training is certified by an independent body, and if so, by whom; and

- how the Applicant assures its contractors and subcontractors are well-trained.

An Applicant should also provide a description of the jobs contractors and subcontractors are hired to perform, or are expected to perform during or as part of any construction/rebuild of the system.

Emphasis in this Section is on the technical qualifications of system employees and contractors, rather than development and promotional opportunities discussed in Form VIII.

FORM XII. FRANCHISE TERM

In the space below, the Applicant should:

(1) state the franchise term, including extensions of term, it seeks for the City system; and

(2) describe why it believes the proposed franchise term is appropriate, considering expected changes in cable technology. If the Applicant claims that the franchise term it proposes is required for financial reasons, it should describe in detail those financial reasons, and provide any documentation required (including, for example, financial projections and depreciation schedules) to substantiate that claim. If the Applicant has already provided the documentation in Form III, it may reference that information.

FORM XIII.

MISCELLANEOUS INFORMATION

FORM XIII-A. ANALYSIS AND STUDIES OF DEMAND FOR CABLE SERVICES

Applicant should attach copies of any analysis, evaluation or study of demand for cable service in the City, and any analysis, evaluation or study of demand for cable services elsewhere, which the Applicant believes is relevant to evaluating whether its proposal is reasonable to meet the future cable related needs and interests of the community, taking into account the cost of meeting those needs and interests.

FORM XIII-B. SURVEYS

1. Applicant should attach a copy of any survey of City residents, businesses or subscribers it conducted within the last three years regarding cable services,

facilities or equipment; or regarding subscriber willingness to pay for any cable service, facility or equipment (including access services, facilities or equipment). The Applicant should also attach any reports, analyses, studies or other documents regarding such a survey.

2. The Applicant should attach a copy of any survey of City residents, businesses or subscribers conducted within the last three years regarding a need or interest in voice, video or data services (other than programming services).

FORM XIII-C. IMPACT OF GRANTING FRANCHISES.

1. The Applicant should describe the impact on the public rights-of-way of building and operating its proposed system.

2. The Applicant should describe the impact on the public interest of constructing or rebuilding its cable system in the City. The Applicant should provide as much factual information concerning the physical and economic capacity of the existing rights-of-way in the city as is available to it.

3. If not already provided, please provide a description of the proposed system as completely constructed, including an estimate of above-ground and below-ground plant mileage and its location, and information on the availability of space on poles, rights-of-way, easements and conduits, including, where appropriate, an estimate of the cost of any rearrangement of facilities (those of Applicant or of others) necessary to accommodate the construction of the system. The application must show whether system construction shall require the installation of additional utility poles, except in areas where no poles are located and no underground utility facilities exist.

FORM XIII-D. COMPLIANCE

1. Has the Applicant been informed that it is out of compliance with any provision of an existing franchise with the City?

Yes No

2. If the answer is "yes," will the Applicant take steps to bring itself into compliance?

Yes No

3. If the answer is "yes," describe those steps for correcting each type of non-compliance, and policies or procedures Applicant will use to prevent future non-compliance on those issues.

FORM XIII-E. RENEWAL PROCEDURES

Please answer the following questions.

1. Is the Applicant seeking franchise renewal pursuant to the provisions of 47 U.S.C. § 546(a)?

Yes _____ No _____

2. If the answer to the foregoing is "yes" and the City should decide preliminarily to deny renewal, does the Applicant desire the City to commence administrative proceedings under 47 U.S.C. § 546(c)(1)?

Yes _____ No _____ Undecided _____

3. If the Applicant answered "yes" to question #1, please provide and attach a copy of the notice that the Applicant filed with the City for the purpose of activating the formal procedures of 47 U.S.C. § 546(a) - (g). If this notice was not given during the period that began thirty-six months and ended thirty months prior to the then-scheduled expiration of the franchise, the Applicant should explain why it believes it has properly activated the formal renewal procedures.

FORM XIII-F OPERATIONAL POLICIES

1. Please describe policies and methodologies relating to provision of services to subscribers, including but not limited to:

Disconnections for non-payment

Subscriber Privacy and release of information to affiliates or third parties for marketing purposes

Notices to subscribers for changes in programing or rates

Return of converters and other equipment

Records of appointments whether kept or canceled

Credits for services not received or downgrades of service
Refunds - including where checks are issued and timetables for issuance

Phone calls, door tags and other notifications to subscribers with appointments

FORM XIII-G ADDITIONAL INFORMATION

Please attach any additional information necessary to respond to the RFRP.

END OF APPLICATION FORMS

CITY OF ST. LOUIS COMMUNICATIONS DIVISION

STAFF REPORT

FUTURE CABLE-RELATED

COMMUNITY NEEDS AND INTERESTS

and

OPERATOR QUALIFICATIONS

in

THE CITY OF ST. LOUIS

November 1999

Communications Division

City of St. Louis

4971 Oakland Avenue

St. Louis, Missouri 63110

314-533-5802

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EXECUTIVE SUMMARY

The City must determine whether to grant a renewal of the cable television franchises held by St. Louis TCI (�TCI�), which was purchased by AT&T in February 1998 without a request for transfer. The City may renew a franchise through informal negotiation with the Operator over terms and conditions, but may not deny a renewal unless it completes a federally-mandated formal process.

RENEWAL PROCESS

Under federal law, the City can refuse to renew TCI�s franchises only after a specified administrative process which includes the City�s issuance of a Request for Renewal Proposal (RFRP), TCI�s response to the RFRP and the City�s evaluation of both TCI�s past performance and future promises assessed against community needs. A refusal to renew must be based on one or more of four criteria:

- compliance with the material terms of the existing franchise and applicable law;

- quality of service;

- financial, legal, and technical qualifications; and

- whether TCI's proposal meets the City�s future cable-related needs and interests, taking into account the cost of meeting those needs and interests.

The City may not deny renewal based on other grounds, such as particular programming selections or rates for services. In addition, while the City encourages competition in the multichannel video market, and is free to grant additional cable franchises at any time, the City must review TCI�s franchise renewal proposal on its own merits, based on the above criteria. The renewal process and decision to renew or deny the incumbent may not be treated as a competitive bid process.

THE STAFF REPORT

The Communications Division of the City of St. Louis - as Agency for the administration of the cable franchises - has prepared and submitted these documents to assist the Board of Aldermen in its deliberations to approve or deny renewal of the current cable franchises.

The Agency's mission for renewal was to conduct technical tests and subscriber surveys, review franchise documents and correspondence, tabulate subscriber complaints and correspondence, seek fresh stakeholder input, evaluate other pertinent city studies, research corporate and technological developments/trends in video delivery, and gain a general sense of what other communities were doing about and receiving from their renewals.

From this research, the Agency has prepared documents for the Board's review and consideration.

Past Performance Review

Ascertainment of Future Community Needs

Request For Renewal Proposal (RFRP) (draft)

NEXT STEPS

After approval (with or without modification) by the Board of Aldermen, the final RFRP will be given to TCI.

The Agency recommends that TCI be given 60 - 90 days to prepare their proposal.

The City will then have four months from submission to make its decision on approval or denial of renewal, and to begin development of a Franchise Ordinance and Agreement (in draft form) as needed.

GENERAL AND SPECIFIC COMMUNITY NEEDS

The Agency has developed the following "community needs and interests" , which are extensively discussed in the body of the report. This summary serves as an overview and is not intended to be all-inclusive.

The General Goals and Needs

The following are general goals that should be achieved over the course of the next franchise term:

- The entire city - business as well as residential area - should be served by a modern state-of-the-art cable system, capable of providing all services demanded by subscribers.

- The city's cable system should be interconnected with others owned by the operator so that video, data, and voice can flow freely between the City and surrounding municipalities and counties.

- Public community access centers providing programming and channel management on the cable system should continue to be supported, with interconnection between area systems owned by the operator and possible regionalization of access center activities to foster community awareness and a broader base of financial support.

- The cable system serving the City should be designed so that it is economically feasible to upgrade periodically, in order that City residents may take advantage of technology improvements and innovations, and deployment of new services in the future.

- All offered cable services should be promptly available throughout the City without geographic discrimination, including downtown, new in-fill residential neighborhoods, business buildings and parks, schools, libraries and city facilities.

- City subscribers should receive reliable and continuous service on a 24 hour a day 7 day a week basis with prompt and efficient response to requests for installations, service calls, repairs, equipment, as well as billing, price and channel line-up information.

- City government should be able to address its own needs for interconnectivity of its buildings and campuses via computer and share emergency and other essential data over facilities occupying the city's public rights-of-way.

- Subscribers should have flexibility in choosing a mix of services that meet their individual interests and needs, as repeatedly expressed in letters, complaints and testimony during the previous franchise term.

- Subscribers should not be financially penalized for future changes in delivery technology which would require use of rental equipment to continue receiving services currently available as analog signal over cable-ready subscriber-owned equipment.

Model for Meeting the General Needs

To meet these goals, the City should expect that any cable operator operating a system within the city should be prepared to offer a system which is at least:

- equivalent in performance and capability to a hybrid fiber-coaxial cable delivery network with amplifier cascades of no more than six active components in any cascade from the headend;

- fully activated for bi-directional capabilities including ability to status monitor system performance, reliability and outages;

- able to comply with applicable codes and standards for system performance and operating parameters;

- designed and built so that adequate bandwidth is available for the provision of downstream video and interactive services in all geographic sections of the city.

- capable of use for local emergency alert overrides to viewers at the discretion of the appropriate city emergency agency on a 24 hour 7 day a week basis on all channels.

In addition, TCI or any subsequent operator must:

- improve plant reliability and make repairs and service calls available on a 7 day a week basis.

- address chronic safety problems and code violations when installations are improperly made;

- avoid an incremental or piecemeal rebuild strategy that would result in repeated disruption of and unnecessary clutter in the public rights-of-way;

- avoid network elements or appurtenances that raise either aesthetic concerns or public safety concerns which could affect citizens or other occupants of the public rights-of-way.

• construct systems that are sufficiently flexible to accommodate the need for additional channels and services;

• provide upstream feeds from off-site origination studios for PEG access programing to ensure that picture quality is not degraded before it even reaches the headend;

• ensure that any limitations or features of the system design ultimately adopted do not deprive consumers of options or features available in other comparable systems;

• adequately staff the system with highly trained personnel who can respond to and repair customer equipment and plant problems within hours and days, rather than weeks and months.

The Need for Quality Customer Service

The City has received thousands of complaints since 1989 about TCI's poor customer service, operational response and system technical deficiencies. The overwhelming majority of those complaints focus on missed appointments, terrible picture quality, outages, credits promised but not received, bills for services which had been previously canceled, busy telephone lines, poorly trained office staff, unreturned phone calls, technicians who can't fix problems and service call delays.

TCI has frequently been placed in franchise violation status for many of these problems. St. Louis TCI's claims to have met the customer service standards of the National Cable Television Association are irrelevant, as these standards are not as stringent as those adopted by both the FCC and the City.

While some improvement has been noted in 1999, and monthly complaint counts are somewhat reduced, TCI customer letters and phone calls to the City continue to make clear that they believe TCI is still not providing the kind of service response they want and need. These issues are discussed in detail in the Staff Report on "Past Performance" with recommendations for correction.

Model for Meeting the Need for Customer Service

The foregoing problems must be addressed by a proposal that, at a minimum, corrects past deficiencies and outlines an aggressive and pro-consumer set of policies, procedures and standards.

- Willingness to accept current and future customer service standards enacted by the City as part of the franchise agreement with liquidated damages for failure to meet standards.

- Submission of detailed plans, policy & procedures manuals, training programs, and assurances regarding TCI customer service policies and procedures that meet or exceed the City's current customer service standards adopted in August 1993. Special note should be made of policies and procedures for disconnections, non-payment, missed appointments, credits for outages and poor picture quality.

- Action plans that correct previous deficiencies and provide reliable service with minimal problems and interruptions.

- Evidence that both customer service representatives and field technicians receive sufficient training to meet subscriber needs for prompt and efficient problem-solving and repairs.

- Detailed descriptions of procedures used when the first technician on a repair call cannot solve the problem. The description should include length of time or timetables between follow-up or remedial actions.

- Detailed description of TCI's allocation of technical staff on a 24-hour-7-day-a-week basis.

- Detailed description of quality control procedures as applied to installations, service calls, telephone response, and use of sub-contractors.

- Detailed description of any and all services used for billings, work orders, appointment scheduling, payment processing, including but not limited to a detailed description of the capabilities and limitations of software and hardware used for customer accounts

TCI's responses should be well-documented so that the City may fully analyze future customer service proposals in light of past problems and deficiencies which have been thoroughly discussed and noticed in meetings and correspondence between 1989 and 1999.

Need for a System Upgrade

When the City originally granted cable television franchises to TCI's predecessors in 1984, the cable systems promised and built were considered state-of-the-art. This is no longer the case. The majority of the consolidated Area I and Area II 450 MHZ cable system still use coaxial cables, rather than fiber optic lines, for its backbone. This has negative implications in terms of system capabilities and reliability. In addition, the current use of one-way amplifiers effectively prevents the provision of any types of interactive services.

At a fundamental level, the very design of the systems, which uses amplified coaxial backbone and feeder plant, has caused a number of maintenance and reliability problems. Moreover, the system lacks a status monitoring system, which makes it difficult to efficiently identify, pinpoint and respond to TCI's all-too-frequent outages. In addition, TCI's system currently lacks backup batteries which means subscribers immediately lose service when a commercial power failure occurs on the plant.

Modern cable television systems of today typically utilize a single-cable, hybrid fiber-coaxial ("HFC") architecture with a capacity of 750 MHZ. Therefore, the Board of Aldermen should carefully consider whether the cable system will be upgraded and improved if it is to meet the City's needs and interests and afford the City access to state of the art cable plant technology during the maximum 5 year term of a renewal franchise.

Model for an Upgraded Cable System

This model represents the current industry standard for the construction or rebuild of a cable system.

If TCI proposes a different way of meeting the City's needs and interests, it must show that its proposed system would meet those needs and interests at least as well as would the City Model.

1. The foregoing objectives above could be satisfied by a "model" HFC system using both fiber and coaxial cable, as described below.

- Installation of a fiber optic backbone which ensures that no more than 500 residences, homes, and other structures are served by any single fiber optic node.

- Reduce the number of active components in any cascade to no more than six.

• Use of active components rated for at least 750 MHZ / passive components rated for 1GHz.

• Redundant routing between the headend and each fiber optic node to ensure greater reliability.

• Designed, capable and activated for two-way operation with a clean return path of at least 128 KHz per subscriber. A clean return path for upstream video must meet Federal Communications Commission technical standards for downstream video; a clean path for data requires a carrier-to-noise of 23 dB and a carrier-to-distortion of 25 dB.

• Backup (non-gas) power supplies good for at least four hours• duration.

• Status monitoring equipment that can pinpoint cable system performance / failures / outages.

2. A cable system meeting the City•s needs and interests would also be designed to:

• connect with other systems in the area;

• allow co-location of equipment at system headends; accommodate switching equipment necessary for interactive cable services including - but not limited to - city institutional network elements;

• provide upstream coaxial or fiber feeds that demonstrably carry public, educational and governmental access channel feeds to the headend without distortion or degradation in either analog or digital format compatible with the system;

• provide equipment for parental control of viewing;

• permit the City to issue emergency alerts receivable by all subscribers on all channels;

• support the City•s need for system capacity to: deliver two-way data traffic between departments at the main City Campus and off-campus facilities such as fire and police stations, and other remote department sites; generate Government Access programming from key locations on the Institutional Network;

- allow subscribers with analog tv sets to continue to receive substantial choices of cable service packages during the renewal term without having to purchase or lease digital equipment.

- utilize equipment which ensures that adequate customer service (as described in this report and other applicable ordinances and rules) is being provided; and

- otherwise accommodate future needs and interests for facilities and equipment, including a design that permits further upgrades to avoid obsolescence over the next franchise term.

3. A renewal franchise must include appropriate policies, provisions and requirements for protection of the public, consumer and safety interests regarding upgraded system construction and maintenance:

- a line extension policy which ensures that cable service is available throughout all parts of the City of St. Louis, including downtown and new in-fill residential neighborhoods.

- a schedule for completion of any required or proposed system upgrades as described in the RFRP or the renewal proposal.

- provisions which require TCI to follow applicable construction standards and procedures in accordance with federal, state and local codes, in order to avoid past deficiencies and defects in workmanship.

- appropriate enforcement mechanisms to ensure that these standards and procedures are met;

- improved maintenance requirements;

- requirement for TCI to provide mapping information about its facilities in a format that is compatible with the City's geographic information system.

The Need for Support of Public, Educational, and Governmental Access.

PEG support has provided significant benefits to all City residents. Testimony and needs surveys indicate a loyal viewership, supportive citizens and active

participants. As part of its compensation for the use of the City's public rights-of-way, TCI's continued provision of channel capacity and other types of support for Public Educational and Government access programming would meet an important community need while providing the cable operator with a distinctive product component.

Public and Community Access promotes the expression of diverse viewpoints and local information not covered by commercial media.

Government Access capabilities enhance the City's ability to communicate internally and externally with its citizens and employees and increases the accessibility of government information.

Educational Access capacity can continue to foster important information loops for elementary and secondary schools, while providing access to televised higher education courses and programs for the general subscriber population.

The on-the-job training and development opportunities available through PEG Access enhances the high technology skills of the local workforce.

Kindergarten through 12th grade school populations have benefited from access to educational, governmental and public/community access programming, including "Cable in the Classroom", but have suffered from single school connections that do not supply adequate signal strength for multiple classroom hook-ups within the same facility,

The City has used its Access Channels to cablecast public meetings, in-house training, information on employee policies and benefits, and other programming critical to conduct of the City's employees and their work.

Model for Meeting PEG Access Needs

1. A renewal franchise should expect TCI to continue to allocate no less than 6 video channels for these uses.

1 public access by independent non-commercial producers;

1 community access to showcase the diversity and interests of city residents and the activities, work and issues of non-profit, neighborhood, and civic organizations;

2 governmental access (one general channel available to all cable subscribers and one scrambled channel available only at city facilities)

2 educational access channels (one for K-12 schools in the city/ one for higher education).

2. A renewal franchise should expect TCI to continue operational support for PEG Access.

In addition to channel capacity, TCI should be expected to continue to provide adequate facilities, support funding, upgraded equipment and improved maintenance and repair service for Public and Community access and continue to contract operation of the channels and facilities with a non-profit access corporation which has a track record in fulfilling this mission, such as the current subcontractor. Ongoing support for facilities, personnel, equipment and video production training -over and above the franchise fees paid to the City- would continue to meet a well-established need and continue one of TCI's few successful operations during the previous franchise. As current operating costs are built into the rate base, continuing such support should not result in any appreciable increase on cable subscriber bills.

Model for Meeting PEG Access Needs (con't)

3. A renewal franchise should ensure that quality PEG signals are delivered to cable subscribers.

In addition to channel capacity, TCI should be expected to provide dedicated (preferably fiber optic) upstream feeds to bring high-quality signals from all PEG Access studios' facilities to its headend(s); and to install and maintain the headend electronics necessary to receive those feeds.

4. A renewal franchise should encourage the use of PEG programming to foster regionalism and exchange of diverse programming, information and perspectives.

Channel 21 and Channel 22 have been the vehicle for production and cable-casting of thousands of hours of programming. The mix has included numerous shows featuring interviews with elected officials, the activities of neighborhood organizations, regional election coverage in cooperation with the League of Women Voters and other cable systems in the metro area, current and historical indigenous music, and a host of community-oriented events and features.

There has also been discussion among a number of area franchise authorities regarding the desirability of public and community access programming deployment into areas of St. Louis County which do not currently have it. Such expansion would spread the cost over a larger subscriber base that just the City, and could contribute to a larger goal of metropolitan regionalism which has been found by the Regional Commerce and Growth Association, 2004, Inc and other civic organizations to be critical to St. Louis future.

5. A renewal franchise should ensure that training opportunities and internships are available to interested City residents, students and workforce.

As communications technology becomes more important to the country and region, a skilled workforce plays an important role in the economic vitality of the City. Training and internship opportunities, both inside and outside school curriculums, can help develop valuable workforce skills in video production techniques, electronic exchange and electronic new-gathering.

6. A renewal franchise should guarantee that PEG programming is available to government and educational facilities.

- All educational and government facilities should continue to receive free cable service and at least one free installation

- Additional installations should be made at cost.

- TCI should be expected to cooperate with schools receiving federal funds for wiring classrooms to the Internet, and to co-locate internal wiring and connections to the extent technically feasible

- Drop wires and signal strength to educational and government facilities should be sufficient to allow multiple outlets in different classroom or offices.

The Need for an Institutional Network

The existing institutional network is composed of two-way capacity of 6 digital carriers on the cable plant between a limited number of City facilities. The I-Net, as presently constructed, is neither operationally reliable nor capable of meeting the City s future needs and interests, which include (but are not limited to) interactive training, video-conferencing, video arraignment, traffic monitoring, water control, data transmission, Internet access, e-mail, sharing of

relational databases among different departments, and emergency communications.

The inadequacy of the I-Nets is due, in part, to the fact that TCI and its predecessors have relied on primarily above-ground amplified coaxial plant, and have not installed reliable two-way plant to a number of city sites and facilities which need to be on the network.

As indicated in the body of the Future Needs Report, the City has a strong interest in connecting an I-Net to all its facilities, as well as creating opportunities for certain interconnections with selected municipal, County and State facilities with which the City has reciprocal agreements for services and or funding. The City is cognizant of the costs of constructing an ideal and separate network and does not propose that solution here. While the 1989 requirement for three forward and three reverse digital carriers should be maintained as a minimum, the City needs an I-Net with functionality equivalent to the model described below that will meet many of its needs and interests.

Model for Meeting the Need for an I-Net

A renewal franchise should allow the City to use facilities in the public-right-of-way to meet City communications needs.

- The model network would be integrated in such a way as to permit the seamless flow of data and video information between I-Net sites, and would be constructed with single-mode fiber, using a multi-ring design.

- Each fiber link to an I-Net facility would have 24 total fibers, capable of bi-directional operation. To maximize flexibility, maintain control of I-Net evolution, and take advantage of new technologies as they emerge, TCI would supply fibers, and all of the terminal equipment necessary to create dataports supporting the types of applications previously discussed.

- TCI must also repair and/or replace fiber optic plant in the event of damage or failure. In addition, TCI must respond to such damage or failure within two hours of notification, and complete repairs within 12 hours of notification, and maintain 99.99% reliability.

- As designed, the institutional network will support applications, such as those listed above, that increase the efficiency and decrease the cost of local government operations, and enable access by citizens to City records through the use of public information kiosks.

• Would be designed in conjunction with previous studies conducted by the City for computer networks and the redundancy, security, and interoperability needs identified by the Agency.

If TCI proposes a different way of meeting the City's I-Net needs and interests, then, as with the subscriber network, TCI must show that its proposed system would meet those needs and interests at least as well as would the model.

The Need for Capital Grants for Access and Institutional Networks.

The Public Access and Community Local Origination facilities connected with the TCI cable system have proved both popular with participants and valuable as a training forum for video production.In continuous operation for 14 years, and run by Double Helix Inc, an independent non-profit 501(c)3 organization, the access center has trained hundreds of interns/volunteers,and provided use of equipment to independent producers at nominal or no cost.

Testimony before the Public Utilities Committee of the Board of Aldermen, and response to the Agency's subscriber surveys indicate that citizens of the City feel these are valuable programming services which should be financially supported and continued.

TCI's Area I predecessor, STL Cablevision Partners, made an initial 1984 franchise capital grant of approximately $300,000 to purchase equipment and develop a studio facility. Much of that equipment has since worn out or become obsolete. Double Helix has used its own funds to lease-purchase a limited amount of new and replacement video cameras, editors, miscellaneous equipment and the like. Based on an inventory of equipment still usable, and a list of necessary equipment to continue the Public Access and Community Access programming, it would be appropriate in any renewal franchise to require TCI to provide capital grants for new and updated equipment for the next franchise period.

The Educational Channels are funded by public sources and the Government Access Channels are funded by the cable franchise fee. Both would benefit from fiber-based upstream feeds to improve picture quality or create multiple locations for program origination.

However, any TCI move to totally digital transmission would place an unsupportable burden on all of these PEG channels• operational resources.

The 6 digital channels provided by TCI as part of the 1984 and 1989 franchise agreements have provided minimal and unreliable data connections between selected city buildings. Operating Departments have emphasized the importance of a reliable network connection, which would require installation of different and better transmission equipment than that currently in use by TCI.

Model for Meeting the Need for Capital Funding

1. To continue effective use of certain PEG channels, TCI should again provide capital funding for facilities upgrades and equipment replacement. A renewal franchise should include:

- public/community access studio facilities and replacement of obsolete equipment;

- interconnecting additional video studio feeds to the K-12 channel - including those operated by the public school system, on condition that shared time be available for programming from non-public schools that wish to participate; and

- commitment to cover the costs of Operator changing delivery technology from analog to digital

2. To ensure that delivery of data communications over the City's digital data channels is consistent, reliable and of efficient speed, TCI should provide upgraded two-way capacity to city buildings including.

- 24 pair fiber backbones and feeds that eliminates the use of fault-ridden amplifiers; and

- electronics necessary to operate the network and create an I-Net dataport at each City building .

The Need for Support and Training of Women / Minorities

The City is a demographically and economically diverse collection of residents and businesses. The long-term stability of the City is dependent on a healthy economic life for itself and all its citizens. Tax revenues, jobs, low unemployment rates, a trained and skilled workforce, viability of neighborhood

and regional small and large businesses, are of vital concern to the City's elected officials.

It is understood that cable operators make certain mass national purchases from national vendors (converters, electronics and cabling, billing and data services, etc) to achieve national uniformity, yet the local system still has discretionary latitude for many of the items and services it purchases.

System upgrades, truck fleets, employee work force selection, vendor purchases, professional contracts, construction and installation contracts, locally produced programming, office furniture and supplies, on-the-job training programs, and other expenditures by the city's cable operator provide opportunities to spend some of those dollars locally and diversely to help support the city's economic life.

Training opportunities and internships can provide valuable support in upgrading and enhancing the skills of city citizens and attractiveness of the local workforce, vis-a-vis high tech employment.

Model for Support and Training of Women / Minorities

As a major corporate presence and user of valuable public property for private commercial purposes, TCI should be expected to offer proposals or commitments that address the needs stated above and the following goals :

- Minimum goal of all professional services, installation and construction contracts placed with business enterprises owned/operated by minorities (40%) and women (10%).

- Minimum goal of all locally purchased office supplies and furniture, vehicles, automotive repair services, fuel and parts, and other similar discretionary puchases placed with minority (40%) and women (10%) businesses.

- Employee staffing and hiring - including management level positions - reflecting the demographic diversity of the city's resident population.

- Entry level on-the-job training and internships should be available to city residents who have demonstrated reasonable qualifications and wish to enter the cable or video production fields

• On-going on-the-job training for employees with special emphasis on skills development for minorities and women seeking promotion to managment-level positions.

• Independent measurement and verification of compliance with established goals and objectives for minority and women participation through use of a third party monitor to provide SEMI-ANNUAL reports to the City on spending and hiring patterns that address these needs.

The Need for Subscriber Choice and Selection In Services

City subscribers have repeatedly stated that they would prefer a broader selection of options or packages tailored to their viewing habits. Comments from public hearings and surveys indicates that many subscribers are interested in "a la carte" selections paid for on an individual or grouped channel basis, i.e. "sports" or "children" or "news" channel packages. Many object to buying digital tier so that they may continue to order pay-per-view movies which were previously available on an analog tier basis. Others object to the most desirable new programming being offered only on digital tiers at substantial extra cost.

However, additional choices and new services are balanced by concerns about future availability and affordability of current services and equipment necessary to receive such services, especially for low-income and fixed income families. For example, subscribers can currently use cable-ready tv sets to access Basic and Expanded Basic (BST and CPST) programming and certain premium channels, without use of converters.

Survey responses also indicate substantial interest in other non-video services delivered over cable system: Internet services scored high, telephony services lower.

Meeting the Need for Subscriber Choice and Service Options

1. Any franchise renewal proposal may address in detail TCI's plans for programming quality and mix, tier placement, buy-through provisions and new or additional services.

While the City will not dictate any particular video programming or other service, the selections TCI proposes on its current 450 MHz system can be specifically described. While the City can request details of the Operator's

video programming services for informational purposes, this Staff Report does not suggest that the formal proposal will be evaluated on that basis.

Descriptions of additional programming or new non-video/ interactive services which TCI proposes in the future should be accompanied by :

- a timetable indicating when such services would be available;

- an explanation of how such offerings would be made available to subscribers; and,

- technical limitations, conditions, or regulatory issues which would affect availability.

2. Any franchise renewal should address the issue of affordability of service for low-income and fixed-income subscribers.

The City will not dictate nor prohibit use of any particular navigation device. On the contrary, the system's facilities and equipment should not unnecessarily foreclose any options in this area that might be selected by the operator, and to the extent possible, should be compatible with such options as may be developed in the future.

- The Operator's proposal should explain specifically how it would minimize (or aggravate) the exclusion of low-income or elderly citizens from access to electronic information.

Three different alternative models are suggested as possible ways to deal with this issue. The Operator may :

- commit to significant senior citizen and/or low-income discounts; or

- ensure that BST and CPST service will remain accessible via cable-ready tv sets without additional costs; or

- provide low-income residents with ability to obtain basic service on a bulk-rate basis.

Operator may propose other alternatives, however, showing how such other alternatives address the issue as effectively as the model approaches noted here.

The Need and Model for Other Franchise Terms and Regulatory Conditions

To ensure reasonable implementation of franchise requirements, a new franchise agreement would be signed and various amendments to the City Code would be proposed. Key provisions include:

• a franchise renewal term of 5 years, the maximum renewal length allowed under the current Franchise Ordinance 59197. This ensures that the City is protected against

1) the risk that TCI's cable systems might become obsolete during a longer franchise, and

2) any long-term inability to re-assess community needs and developments in cable technology that would be of benefit to the City in 2005.

• the maximum franchise fee permitted by law (5 percent, at this time) during the renewal term.

• cable franchise grants which authorize TCI's proposed use of public rights-of-way for the provision of Title VI cable service only, to the extent permitted by state and federal law.

• requirements for TCI to comply with City requirements regarding Title II telecommunications service, as permitted by federal, state and local law

• City authority to approve or deny transfers of ownership or control.

• preservation of the City's police powers, including the right to make and amend ordinances and establish reasonable rules and regulations.

• insurance and indemnification requirements.

• remedies, including liquidated damages, penalties and the termination of a franchise, with funds available through a letter of credit, performance bonds or other acceptable means, to ensure that the City can enforce TCI's obligations.

- appropriate permit and other conditions on TCI's use of public rights-of-way.

- customer service requirements to require high-quality service to subscribers.

- provisions governing local rate regulation that accord with federal law.

- reporting requirements and open record provisions.

- provisions prohibiting discrimination among subscribers or persons requesting cable service.

- compliance with local codes, including electrical codes and license requirements.

- system compliance with technical standards for cable systems as promulgated by the FCC.

- require TCI to comply with applicable provisions of existing ordinances.

Notwithstanding the above, to the extent Applicant believes diferent terms or conditions should apply, and should the Applicant want to propose different renewal periods, terms or conditions, it must explain in detail why such change is desirable.

CONCLUSION

This Executive Summary is intended to provide only a general overview of the City's needs and interests in future cable franchises and is not intended to be and should not be construed to be complete or exhaustive. Further specifics and details are provided in the body of and attachments to the Agency/Staff Reports on Past Performance of TCI and Future Cable-Related Community Needs & Interests.

If this Report is adopted, the Board of Aldermen, Franchise Authority for the City, hereby:

1) approves and adopts Agency's Staff Report on Future Cable-Related Community Needs & Interests, and the community needs established and described therein, as approved or amended;

2) approves the Agency's Report on Past Performance of TCI, which is incorporated by reference into the Future Cable Related Needs & Interests document, as approved or amended;

2) authorizes issuance of the attached Request for Renewal Proposals, as approved or amended; and

3) requires TCI (to the extent permitted by federal law) to demonstrate that it is willing to meet the needs and conditions set forth in this Report and the RFRP before determining whether to grant renewal franchises to TCI, unless the Franchise Authroity elects to accept a proposal pursuant to 47 U.S.C 546(h).

PART 1

INTRODUCTION

and

BACKGROUND

ST. LOUIS CABLE SYSTEM

I. CABLE FRANCHISING AND RENEWAL

The City must determine whether to grant renewal of the cable television franchises held by St. Louis TCI ("TCI"), whose corporate parent was purchased by AT&T in February 1999. Under the existing franchise ordinance 59197, the maximum renewal term is 5 years.

A. THE RENEWAL PROCESS UNDER FEDERAL LAW. THE RENEWAL PROCESS UNDER FEDERAL LAW

The process for renewing franchises is controlled by federal and local law. The federal Cable Act establishes two ways for a local franchising authority to arrive at a renewal decision: the formal and the informal processes.

Under the informal process, the City and TCI may use negotiations to come to agreement at any time on terms and conditions of a renewal franchise.

To be effective, a City should first determine what its community needs from its cable system over the next franchise period.

Informal negotiations may occur even during a formal renewal process.

The formal process must be used if a City denies a franchise, and may be used in other situations . When the cable operator or the City properly invokes the formal process, the City conducts an ascertainment process to develop facts about the cable operator's past performance and the community's future cable-related needs and interests.

When the City completes the ascertainment process, it issues a "Request For Renewal Proposal" (RFRP) to the company which may include a deadline for submission.

Once TCI submits its proposal for renewal in response to the RFRP, the City has four months to decide whether to

A) agree to that proposal, or

B) issue a preliminary denial of renewal.

If the City issues a preliminary denial, it shall - at the request of the Operator or on its own intiative - commence a formal administrative proceeding to consider whether the franchise should be renewed. At the end of the administrative proceeding (which includes a full evidentiary hearing with witnesses for both sides) the City issues a written decision granting or denying the renewal proposal, based on the record and stating its reasons.

Ordinance 59197 requires that a public hearing be held by the Board of Aldermen before a final decision is made.

TCI may appeal the City's decision in state or federal court.

Where the formal process applies, if the City were to deny renewal, that denial must be based on one or more of four criteria. Two of these are backward-looking, focused on past performance. The other two are forward-looking, focused on future needs. The four criteria are:

- Compliance: whether the franchisee has substantially complied with the material terms of the existing franchise and applicable law.

• Quality of Service: the franchisee's past performance on such factors as signal quality, response to consumer complaints, and billing practices (but not the particular mix or quality of programming or the rates charged).

• Financial, Legal, and Technical Qualifications: the necessary ability in each of these areas to do what TCI offers in its proposal, based on, among other things, past experience.

• Community Needs and Interests: whether TCI•s proposal meets the City•s future cable-related needs /interests, taking into account the cost of meeting those needs and interests.

These criteria do not include considerations such as particular programming selections or rate levels. In fact, federal law limits the authority of local communities to regulate rates (only equipment, installations, basic service tier) and cable services(evaluating overall quality and mix). Thus, a community may not deny renewal under the formal Cable Act process on those grounds.

B. THE IMPORTANCE OF FRANCHISING

At one time cable systems served merely to retransmit broadcast television signals. They have now, however, become "a dominant nationwide video medium." In many cases, these systems promise to become the broadband information highways of the future. The development of these electronic highways is expected to change forever the way people live, work, and interact with each other by providing users with access to vast quantities of information, services and entertainment in a variety of forms.

As a result, a local government has a compelling interest in ensuring that a cable system is well designed and constructed to help satisfy the community's cable-related needs and interests; that good service is provided at a fair price; that cable services are available to all; and that the flow of information is not monopolized by the company that owns the cable network. These interests are reflected in federal, state and local law.

These interests are particularly strong at the local level because, in order to operate, cable systems must occupy scarce and valuable public property • property that the taxpaying public effectively pays to acquire and maintain. More than 800 miles of TCI cable lie along streets and rights-of-way belonging to and maintained by the City. The City has an obligation to ensure that TCI•s use of this public property benefits the entire community. This means, among

other things, that the City must ensure that the public property is used in optimal ways, and that the public receives fair compensation in the form of franchise fees and other conditions for the use of its public property for private profit.

As a matter of public policy, the City encourages competition in the market for multichannel video services. Such competition, however, is developing slowly. Despite the City s openness to additional franchises, and City Charter requirements for non-exclusive franchises, and the attempts of Congress in 1992 and 1996 legislation to stimulate competition, the City is served by only one cable operator: St. Louis Tele-Communications Inc (TCI). For this reason, the City must be especially careful to ensure that the cable system continues to serve the public interest, and that TCI does not use any de facto monopoly power over City citizens in inappropriate ways.

For example, the City has a particular interest in requiring that all homes in the City have access to cable services, regardless of location, and that businesses that need and want cable video content may also be able to subscribe.

For example, the City has a particular interest in, and has previously made provision for, access by parties other than TCI to speak over the cable system on access channels not editorially controlled by TCI; and for citizens to access diverse programming and receive training in electronic/video production through public, educational, and governmental access facilities and arrangements.

For example, the City has a particular interest and previous requirements that TCI s hiring and spending patterns for local services and supplies reflect the demographics of this community and that all segments of the community derive some benefit from TCI s presence. Thus, previous requirements specified all the city s businesses - including those owned by minorities and women - benefitted from dollars TCI collects from this community. Thus, hiring and promotion practices - including those for management positions - were required to reflect the residential demographics of the City as a condition of the previous franchise.

For example, the City has a particular interest in ensuring that TCI does not use its special access to the rights-of-way to control all the information available to the community. Such control would threaten the concerns that underlie the First Amendment and the nation's traditional freedoms.

For example, the City has a particular interest in ensuring that all City schools and government facilities have at least one free cable drop per building in order that valuable educational and training programs (i.e. Cable in the Classroom and City Channel 63 fare) are available to those school age citizens and City employees during their work day.

These arrangements help to ameliorate concerns that our society could become divided between economic and informational "haves" and "have-nots." As the National Telecommunications and Information Administration (NTIA) has noted, "[b]ecause information means empowerment [illegible] and employment [illegible] government has a duty to ensure that all Americans have access to the resources and job creation potential of the Information Age."

As a matter of state law, recognized and modified by federal law, these interests and others are protected, in part, through the franchising process. For example, during renewal proceedings a community is permitted to establish basic requirements for system design, and to require that operators provide facilities and equipment and set aside channels for public, educational and government use. Thus, the legislative history of the 1984 Cable Act explains:

The ability of a local government entity to require particular cable facilities (and to enforce requirements in the franchise to provide those facilities) is essential if cable systems are to be tailored to the needs of each community [and the legislation] explicitly grants this power to the franchising authority. This is why the renewal process is important to both the operator and community. The City is responsible for protecting the interests of cable subscribers and the general public through the franchising process by identifying future cable-related needs/interests,then translating those needs /interests into franchise requirements, taking into account the cost of meeting such needs/ interests.

C. FRANCHISE AREAS & HISTORY IN THE CITY OF ST. LOUIS

The framework for cable franchising was established by Enabling Ordianance 58462 in 1981. The original 15 year franchises granted to STL Cablevision Partners (Area I) and St. Louis City Communications (AreaII) under Ordinance 59197 in April 1984 did not take effect until all required documents, bonds, insurance certificates and the like were submitted by each of the franchisees. The Area I franchise became effective in July 1984. The Area II franchise became effective in October 1984. Both were transferred to TCI on January 3, 1989, under the terms and conditions established by Ordinance 61093 of November 1988. The two TCI franchises (Area I and Area II) are virtually

identical, and the systems themselves were combined into one headend and operating plant in 1990.

In July 1998, the Board of Aldermen approved Ordinance 64436 establishing October 18, 1999 as the expiration date for both the current franchises. This decision took into account three factors: 1) the City's inability to shorten the Area II franchise by 3 months; 2) the City's ability to extend the Area I franchise by 3 months; and 3) the dangers inherent in acting on one franchise area (south, central and northeast city) while leaving open the possibility of TCI refusing identical terms and conditions a few months later in another area (northwest city).

In February 1999, AT&T completed purchase of Tele-Communications Inc. TCI did not submit to the City a request for a transfer of ownership, claiming that because the city's system and franchise were still formally owned by TCI's subsidiary St. Louis Tele-Communications Inc, the purchase of TCI by AT&T constituted merely a "change of control", rather than a "change of ownership". Given the pendency of renewal the City did not pursue this matter, although the City has not waived any rights in that regard. In October 1999, Ordinance 64773 was adopted by the Board of Aldermen and approved by the Mayor in November. It requires any cable operator in the City (under a franchise granted or renewed on or after the effective date of that Ordinance) to open its network to unaffiliated Internet Service Providers if it chooses to offer Internet services over the cable system. A referendum process has been intitiated concerning the ordinance, a procedure provided for in the City Charter. Unless and until the referendum procedure is concluded favorably for the Ordinance it will not become effective. The Board of Election Commissioners have found that a sufficient number of signatures have been presented and has referred the matter to the Board of Aldermen. If the referendum procedure continues, the Board will have the opportunity to repeal the ordinance. If they do not, the ordinance will be voted on by City residents in a city-wide election. At this time it appears that such election would possibly later in the year 2000, perhaps November.

TCI's orginal franchises expired on October 18, 1999 and have been extended under all current terms and conditons until April 18, 2000 by Board Bill 189.

D. THE CITY'S RENEWAL PROCEEDINGS

In October 1996, TCI submitted a letter of intent that it wished to renew its franchise and reserve all its rights under the "formal" process.

In January 1997, the Board of Aldermen issued a resolution commencing an "Administrative Review" proceeding, and therefore preserving all of its rights under the formal process. Agency staff began review of documents, surveys of other TCI communities, and other renewal research.

In February and March 1997, the Board of Public Service held public forums on technology and electronic interaction between City Departments and with the residential, business and educational communities, and subsequently completed a "Communications Infrastructure Plan Document" as a general guide for interconnectivity over a government network.

Since 1997, the Franchise Agency has tried, with limited success, to engage TCI management in "informal renewal" discussions that might identify areas of agreement and conflict regarding future cable systems and operations. Other local franchise authorities have experienced similar problems. The City is concerned that the lack of progress in the area may be due to a lack of certainty within TCI about cable operations in the entire metro area.This concern appears to be borne out by TCI"s recently announced intention to transfer all of its St. Louis area systems to Charter Communications.

In February 1999, the Public Utilities Committee of the Board of Aldermen held two hearings to gain preliminary citizen input on the quality of TCI"s past service. Letters from citizens unable to attend were included in the record of the proceedings.

Given the lack of progress in informal negotiations, the Agency was directed to develop documents necessary to a "formal" renewal, in order to protect the City"s interests.

The Agency has since conducted subscriber surveys and a technical evaluation, incorporated city computer network studies, sought input from key stakeholders, and reviewed extensive franchise performance files in preparing this Agency/Staff Report.

E. RENEWAL CONTEXT AND NEXT STEPS

TCI has asked the City to renew its franchises. The City must consider whether to grant renewal, and, if so, on what terms.

Even under the formal process, in order to obtain renewal of its franchise, TCI must -among other things- make proposals that are reasonable to meet the City's future cable related community needs and interests, taking into account

the cost of meeting such needs and interests. Thus, the City has conducted a needs ascertainment process to identify those cable-related needs and interests, as detailed in Part 2 below.

TCI controls approximately 270,000 subscribers in the City of St. Louis and the counties of St. Louis, St. Charles, Madison and St. Clair, including the municipalities of St. Peters, Clayton, University City, Belleville, East St. Louis, St. Ann, Maplewood, Brentwood, Maryland Heights, parts of Creve Coeur and Chesterfield.

Charter Communications (recently purchased by Paul Allen) controls about 250,000 subscribers in the metro area. As a result of recent purchases and acquisitions, Charter is in the process of becoming the fourth largest national cable operator with 7,000,000 subscribers. Its national headquarters is in St. Louis. As noted above, TCI has announced its proposal to transfer the cable system in the City to Charter, along with all other TCI systems in the greater metopolitan area.

The provisions of the Cable Act formal process, described above, control whether the City can grant or deny renewal to TCI. The City's decision on renewal of TCI's franchise is independent of whether another company might offer a better agreement. Thus, while the City is free to invite other cable companies to compete at any time, under the federal law its decision on TCI's Area I and Area II renewal is separate from any decision to grant a different company another franchise.

Under federal law, the City can refuse to renew TCI's franchises only after a specified administrative process which includes the City's issuance of a Request for Renewal Proposal (RFRP), and TCI's response to the RFRP. Timetables estimated for such a process include a typical 45 to 60 (or more) days for incumbent to respond with a proposal, and four months (under federal law) for the City to make a preliminary decision about the proposal.

We note for the record that local governments are given 120 days to decide transfer of ownership requests once a complete application has been filed.

The current franchise has been extended for 6 months under existing terms and conditions until April 18, 2000.Further extensions may be warranted to allow the City adequate time to review both renewal proposals and any future requests for transfers of ownership or control. Based on the work performed to date, this Report recommends that the City issue a Request for Renewal Proposal in substantially the form of the attached draft RFRP.

If this Report is adopted, the RFRP will require TCI to submit proposals in response to the RFRP within a specified number of days from the time the RFRP is issued. The RFRP format and specified time frame should be adequate to allow TCI the time necessary to respond with a complete and detailed proposal, while preventing unnecessary delay.

Once TCI submits its proposal in response to the RFRP, federal law requires that the City provide prompt public notice of such proposal and, during the four month period which begins on the date of submission of the proposal, hold a public hearing to consider renewal . The local ordinance 59197 also stipulates a public hearing on renewal and action by the full Board. Thus, the Board of Aldermen will have four months to evaluate TCI's formal proposal once it is submitted and make a decision to renew the franchise or issue a preliminary assessment that the franchise should not be renewed. . If the City concludes on the basis of TCI's proposal that the franchise should not be renewed, the City shall, at TCI's request or on its own initiative, commence an administrative proceeding as described above. Under federal law, TCI is free to continue informal discussions with the City after the issuance of the RFRP, and the City may, after affording the public adequate notice and opportunity for comment, and separate from the formal process, grant or deny an informal renewal proposal from TCI at any time.

II. THE FRANCHISE AGENCY ROLE & REPORT

A. FRANCHISE AGENCY'S ROLE IN THE FRANCHISE AND RENEWAL PROCESS

Under Ordinance 59197, the Franchise Authority - the honorable members of the Board of Aldermen of the City of St. Louis - established the Cable Communications Manager (CCM) as the Agency which supervises and administers the cable franchise, investing him with all delegable powers and duties of the Franchise Authority.

The Communications Division is responsible for regulatory duties such as resolving subscriber complaints, enforcing franchise provisions, monitoring EEO requirements, notifying TCI of franchise violations, processing street occupancy and construction permits, regulating rates to the extent permitted under federal law, as well as programming Government Access Channels 16 and 63, and other operational duties.

The Agency is responsible for maintaining all files and records regarding the cable franchise. It has relied on extensive collections of documents,

correspondence, testimony, test and survey results in compiling the record and past performance and future needs. Several of these items are specifically mentioned or included in this report. Others, due to volume, are not included but are hereby incorporated by reference as the basis for findings and recommendations by the Agency staff.

This ascertainment of ?Past Performance? and ?Future Community Needs? forms the basis of these Reports and the recommended RFRP..

B. CONTENT AND PURPOSE OF THE STAFF REPORT

The Agency staff has collected and summarized documentation of past performance from its files, evaluated the status of governmental, educational and public access efforts, conducted surveys of subscribers and citizens, assisted the Public Utilties Committee of the Board of Aldermen with 2 public hearings to collect citizen comments and concerns, completed a technical evaluation of TCI?s system, and sought input and priorities from elected officials and key stakeholders.

This Staff Report along with the Past Performance Review provides the Franchise Authority with a detailed analysis of the Communications Division?s findings and recommendations in regarding:

? 1989 through 1999 past performance of the current cable operator

? compliance with existing franchise terms and conditions, federal and local law

? technical capabilities of the cable system physical plant

? analysis of future community needs and interests for a City cable system

? a draft Request for Renewal Proposal (RFRP) to which TCI must respond

This report is intended to provide the Franchise Authority with detailed information on which it may base a decision to deny or renew the franchise of incumbent operator St. Louis Telecomunications Inc. (TCI).

Past Performance Review

The Agency staff's analysis and recommendations of TCI's past performance are based on records and complaints in the Agency's possession. The "Past Performance Review" attempts to briefly and objectively summarize - by topic area - the requirements of the franchise ordinances and the successes and deficiencies of TCI in meeting those requirements in the 11 year period from 1989 to 1999. Included with the report are complaint summaries, rate history, compliance checklists, survey results and summary technical reports. It is incorporated by reference into this Needs Report.

Where appropriate, the Past Performance Review contains staff recommendations for the future based on the Agency's experiences of the past. Such recommendations are also incorporated in the discussion of "Future Community Needs Assessment."

Future Community Needs Assessment

The Future Community Needs Assessment discusses both operational and financial commitments which the Agency believes necessary to meet cable tv-related needs of both the city and its citizens. It is based on surveys, network studies, public hearing testimony, interviews with and feedback from elected officials and operating departments, subscriber letters and complaints, Agency experience, technical analysis of the current system, and the upgrade experience of other communities.

The needs assessment outlines the kinds of answers which will be viewed favorably by the City in evaluating any TCI proposal based on the community needs established through the 1999 review process. The Agency staff's analysis and recommendations regarding the community's future cable-related needs and interests take into account the cost of meeting those needs and interests.

Legal and Financial Issues and Operator Qualifications

Under federal law, the financial and legal qualifications and abilities of the Operator are two key tests in determining the Operator's suitablity to be granted a franchise or renewal.

Technical Issues and Operator Qalifications

Under federal law, the third key test for franchise or renewal is the Operator's technical ability to operate and manage a cable system, including how well the operator is meeting performance standards mandated by the Federal

Communications Commission, how well the plant and system have been maintained, quality of installations,compliance with electrical and building codes, and other factors which speak to the operator's performance in the technical realm.

The Agency has conducted 4 formal inspections of the TCI system. Results of the most recent survey, in October 1999 are summarized, along with comparisions to the results of technical tests and inspections conducted in 1989, 1990 and 1993.

In addition, the reports submitted by KramerFirm.Inc following the previous inspections are part of the Agency's performance file and are incorprated into the Performance Review by reference. Request for Renewal Proposal

The Agency has prepared a draft RFRP for the Board of Aldermen's consideration.We recommend that, in the interests of administrative simplicity, the City issue a single RFRP setting forth City-wide requirements and combining the two separate franchise areas into a single franchise. It outlines the elements which must be addressed in the proposal, requires documentation or support for certain operational elements, addresses pertinent legal matters and corporate structures, and requires detailed explanations of proposed tehcnical operations. In addition, the attached RFRP asks TCI to provide financial data and further information on the operational and capital costs of meeting the City's needs and interests. TCI may seek to show that the cost of addressing some needs and interests would be unreasonable.

Thus, when TCI submits its proposals for renewal, the Board of Aldermen will have an opportunity to consider TCI's financial showings, and reach a conclusion regarding the costs of meeting community needs and TCI's apparent ability to do so.

The Board of Aldermen would then make decisions based upon evaluation and comparision of the adopted Staff Report/RFRP and TCI's proposals . A grant of renewal or a refusal to renew must be based on one or more of four criteria:

- compliance with the material terms of the existing franchise and applicable law;

- quality of service;

- financial, legal, and technical qualifications; and

- whether TCI's proposal meets the City's future cable-related needs and interests, taking into account the cost of meeting those needs and interests.

The City may not deny renewal based on other grounds, such as particular programming selections or rates for services.

While the City encourages competition in the multichannel video market, and is free to grant additional cable franchises at any time, the City must review TCI's franchise renewal proposal on its own merits, based on the above criteria. The renewal process and decision to renew or deny the incumbent may not be treated as a competitive bid process.

III. BACKGROUND St. Louis & Its Cable System

A. BACKGROUND OF THE CITY OF ST. LOUIS

The City of St. Louis is located in the heart of a joint Missouri and Illinois standard metropolitan statistical area spanning both sides of the Mississippi River and both sides of the Missouri River. The chartered City of St. Louis, which is also the "County of the City of St. Louis" is a separate and distinct political entity, which (for reasons going back to the 1870's) has no opportunity to either expand, incorporate surrounding areas, or join governance with other jurisdictions. Its 63 square mile area includes a mix of vibrant and struggling neighborhoods, light and heavy industrial, commercial and retail areas.

Its population is currently estimated at around 350,000, with a demographic mix in all economic and racial segments. Minority, elderly and rental housing populations are significant in size and frequently at the fixed or lower end of the economic scale.

The City is home to many large national commercial institutions, including banking and brewing, as well as 2 major universities with attached major medical complexes, additional hospitals, a teacher's college, a junior college, a major network of main and public libraries offering internet access, major chemical companies (Mallinkrodt and Monsanto) and telecommunications-dependent employers (AG Edwards Stockbrokers and AT&T long-distance facilities among others).

The City experienced declines in population during the late 1980's and early 1990's but recently has been advantaged of changes in tax laws which are encouraging redevelopment, in-fill housing and major residential re-

development in various pockets of the city. Cable service to those new homes and neighborhoods is key to their attactiveness and viability.

In addition, the City is actively pursuing economic development and economic growth in the downtown area, with substantial resources committed to a convention hotel, rental and condominium housing in renovated buildings, and attracting new businesses - targeted towards those primarily high-tech and entrepreneurial in nature - which rely on advanced telecommunications. The Regional Commerce & Growth Association has made clear that access to advanced telecommunications is one of the top 5 criteria in business site selection.

The City has licensed 8 competitive access providers and 4 long-distance providers who have installed fiber optic networks in City streets. Their construction has been extensive, investment is enormous, and protection of their infrastruture from damage is essential. St. Louis has been noticed as the 15th "most-wired city" in the country by "Yahoo! Internet Life" Magazine . For these reasons, the City is particularly concerned about managing its roads and other public rights-of-way effectively and in the public interest.

In a housing and business market as competitive as the St. Louis metro area - with 3 Missouri counties and over 90 municipalities competing for residents and businesses, the City's people need first-rate services and facilities, which do not continue to suffer in comparision to cable services in the surrounding counties and municipalities .

The cable system is part of the communications infrastructure on which the City depends. The City recognized this role of cable in its initial issuance of franchises for cable subscriber and institutional networks in the City. The importance of a modern, broadband, fully-capable cable system available to City residents and linking governmental facilities is a major concern of the City in determining whether the franchises granted to the City's current cable operator, St. Louis TCI, should be renewed.

B. DEVELOPMENT OF THE CABLE SYSTEMS IN ST. LOUIS

In the early 1980's, the City granted a franchise to Melhar Communications to provide cable service in the City. After several years, the franchise was rescinded because Melhar never began construction. Subsequently the City sought new bids to construct cable systems in the City's public rights-of-way. In April 1984 the City selected two cable operators - St. Louis City Communications and STL Cablevision Partners - with which to enter into cable

franchise agreements. At the insistence of the operators, the City was divided into two franchise areas, and the franchises issued on that geographic division. Both operators had declined entering into a franchise agreement if they both had to build the entire City. St. Louis City Communications held a franchise for the northwest quadrant of the City (Area II, generally west of Taylor and north of Delmar) and STL Cablevision Partners served the remainder of the City (Area I). The effective date of each franchise was based on City receipt of all required doucments, bonds, insurance certificates, operating agreements and the like. Terms and conditions were spelled out in Ordinance 59197.

Prior to federal pre-emption of rate regulation in November 1984, the City held authority to approve rates.

Both Franchisees proposed to build coaxial plant powered by amplifiers and line extenders.

AREA I

The franchise was granted effective July 1984 to STL Cablevision Partners, which appeared to use financing provided by Tele-Commnunications Inc (TCI) for construction of the system, and entered into a management agreement so that the system appeared to be operated by- although not controlled by - TCI corporate personnel from its inception. It was built as a 450 MHz system capable of delivering 54 to 60 channels from the headend at Delmar and Kingshighway, and served its first customers in the spring of 1985. STL met its construction deadlines for activating 90% of the area within 3 years, albeit as a one-way system rather than two-way system as required by the franchise. However, the number of amplifiers used to reach the far corners of the city often exceeded the recommended maximum of 26, reducing picture quality.

Almost from the beginning, the Agency routinely received numerous complaints about either construction problems, poor picture quality, outages, rude or untrained customer services representatives and technicians.

AREA II

The franchise was originally granted to SLCC effective October 1984. The system SLCC built was centered on a headend at Kinghshighway and ML King Blvd using a 300 MHz plant to distribute television signals over this system. Although the franchise agreement required a 450 MHZ plant capable of delivering 54 channels, SLCC build a 36 channel system. The system was required to be designed for two-way capability, but two-way plant was never

activated. The smaller physical area of the system meant that only a few amplifier cascades were longer than 26 amps.

The City received fewer complaints per thousand subscribers from Area II than it did from Area I. The complaints that were received tended to focus more on programming limitations than operational problems.

TRANSFER OF OWNERSHIP

In June 1988, Tele-Communications Inc. approached the City about purchasing both the Area I and Area II franchises, which they planned to continue to operate as separate systems, at least for the immediate future.

The transfer was approved by Ordinance 61093 in November 1988 subject to certain conditions. These conditions, embodied in the ordinance, were designed to address some of the performance problems the systems had suffered up to that point, and to ensure that improvements in the systems and operations would be accomplished: implementation of customer service standards, agreements regarding cable service in downtown St. Louis, settlement of outstanding obligations to a community fund, , provision of data channels for a government computer network, wiring of City Hall offices and all schools for cable tv, upgrading Area II to a 54 channel system, clarification of franchise fee payments and reporting requirements, and capability of the city to cablecast local "emergency alerts" over the systems. The transfer sale took effect on January 3, 1989. TCI bought the assets but not the liabilities of SLCC. SLCC principals left town without paying some of their vendors.

CONSOLIDATION OF SYSTEMS

In the fall of 1989, TCI proposed to merge the two system headends and combine the systems and upgrade Area II, in order to deliver identical 54 channel packages of programming to both Franchise Areas.

The City conducted technical tests of both systems in October 1989, using an outside consultant, Jonathan Kramer. The physical plant assessment and performance results were so unsatisfactory that the Agency refused any sort of administrative modification of the franchises" technical requirements until major improvements were made.

A second technical test in March 1990 indicated improvements in the physical plant and overall picture quality, which, accompanied by TCI commitments for a strong (and long overdue) "preventative maintenance" program, led the

City to approve consolidation of the systems in May 1990 subject to conditions. TCI promised improved telephone response, agreed to further periodic testing of the combined system, and began a system upgrade to promptly deliver 54 channels of service to Area II. Billing systems and subscriber databases were changed in Area II shortly thereafter, so that all city residents received the same types of bills, separated into two billing cycles with different due dates.

SUBSEQUENT SYSTEM CHANGES

TCI introduced addressable converters in the early 1990's, allowing subscribers to order PayPer View movies and events.

In 1993 TCI announced - but did not implement - an upgrade of the system to a fiber optic backbone. This may have been infuenced by the implementation of rate regulation, which cut rates back modestly from $23.68 to $21.25 in St. Louis (Basic + Expanded + Converter) as well as elsewhere across the country

. TCI national plan for fiber upgrades to their subcriber networks were also put on hold. Locally, TCI did partner with a subsidiary - Teleport Communications Group - to build fiber plant in the City for its business telephony customers, but no cable subscriber ever benefitted from this new construction.

In 1998, TCI began planning a reduction in the longest amplifier cascades to some (but not all) parts of the city, proposing to use three short (2 to 3 mile) fiber optic runs from the headend to the intersections of Hampton/Fyler and Penrose/Lee. As of October 1999, only the Garrison/Olive (east) run is completed, and TCI is using an alternate route to the Hampton/Fyler (south) run to feed signals to parts of south St. Louis from its county headend in Overland, Missouri. The Penrose/Lee (north) run in pending completion.

In May 1999, TCI moved its primary St. Louis office from 4941 Delmar to 5240 Oakland Avenue (at Macklind) and installed a more sophisticated phone system. It also relocated its regional management offices and personnel to this site, resulting in approximately 37 new jobs in the city.

JOINT FRANCHISE AREA REVIEW and REPORT

This Report addresses both franchise areas as essentially one system, noting any differences only where necessary. For convenience, the discussion below refers to the franchise rather than franchises with respect to TCI s two City franchises for Area I and Area II.

C. PROBLEMS AND LIMITATIONS OF TCI SYSTEMS

The existing 450 MHz coaxial system represented current technology in 1984. This is no longer true fifteen years later. Further advances in cable technology have left the St. Louis TCI system behind in a number of respects. Other communities with TCI systems have seen deployment of additional bandwidth (550 - 750 MHz), advanced services for data, telephony and Internet access, and widespread use of fiber-optic cable backbones to reduce amplifier cascades, improve picture quality and increase reliability. In addition to outmoded plant design, the system has been subject to chronic maintenance and operational problems.

Signal quality issues represent a significant number of the complaints filed with the City's Cable Franchise Agency each year. Both local broadcast and satellite-delivered channels have been plagued by poor pictures as signal ingress (ghosting), snowy pictures and audio, and high-end signal strength roll-off. These deficiencies can be attributed to both outmoded plant and very poor maintenance practices.

In both Area I and Area II, the original design left many cable trunk routes far too long, requiring too many amplifiers to reach subscribers at the end of the lines. These long amplifier cascades degrade signal quality and reliability. While TCI has recently begun deployment of three short fiber runs -north, south and east - which may cause the orginal amplifier cascades to be reduced in some degree, the changes are not sufficient for long-term purposes, as discussed below. As of the 1999 technical evaluation update, the Area I distribution plant still included extremely long cascades of up to __ amplifiers, and the Area II plant up to 32 amplifiers. Area II has two different amplifier cascades, only one of which will be reduced by the planned Penrose/Lee fiber node.

Further, TCI's construction approach does not appear to be designed to bring the plant in compliance with NEC and NESC safety codes, especially in regards to height and clearance requirements.

The Government Acess channels operated by the Agency have been plagued by chronic signal quality and reliability problems which may be more fully corrected once TCI's fiber optic electronics are installed in the TCI headend to take the video feeds from the Government Access Studio. The Public/Community Access signal levels also need correction at the headend.

In far too many cases over the years, construction and installation practices of both TCI employees and subcontractors have been marred by poor workmanship and deviations from applicable electrical codes.

Neither Area I nor Area II has been fully activated for two-way use as the original franchise agreements required. Thus, neither is ready to provide the advanced interactive services that have already been developed and may be expected to develop over the next two to ten years. To the extent that amplified coaxial cable represents a dead-end technology, TCI should ensure a clear upgrade path to a Hybrid Fiber Coaxial (HFC) distribution plant that will allow new service delivery.

TCI has provided the most basic elements of the required institutional network - 6 digital carrier channels(3 forward/3 reverse) - but they haven't work particularly well particularly often. This has prevented City government from fully utilizing interactive data communications that formed part of the original franchise plan.

Fifteen years of experience makes clear that a renewal franchise must not only repair these deficiencies, but also provide for practical enforcement mechanisms to prevent future shortfalls.

TCI has notified the Agency about a possible upgrade of the system, which is only in the planning stages of inventory and design needs.

Key among the problems of this upgrade planning is that the system-wide fiber backbone modernization program for the City (currently in the design phase) may be substantially less extensive than are similar modernization efforts elsewhere. For example, a single fiber node in advanced systems generally serves 250 - 500 homes, while the current TCI plan for the City and surrounding metropolitan areas allows nodes as large as 1200 homes.

Even to the extent that such a design might be considered adequate for current services, it falls short of the industry standard for cable systems now being constructed to provide for the services and capabilities that will develop over the next five to fifteen years.

D. THE NEXT-GENERATION CABLE SYSTEM IN ST. LOUIS

The City's needs and interests for its cable system over the next franchise term are discussed in detail below. The following overall needs, interests and points, however, may be noted:

The cable system serving the City should be reliable and functional for video delivery.

- The existing system is at the limit of its abilities to satisfy the City's cable-related needs and interests, and cannot be expected to satisfy those foreseeable in the near future without fundamental improvements.

- In particular, additional fiber in the system would improve performance and reliability for subscribers, many of whom have made clear both are unsatisfactory.

- There should be no more than six active elements in cascade between the headend and the subscriber.

- Bandwidth of 750 MHz, with a minimum 550 MHz devoted to downstream (preferably analog) video programming delivery and a maximum of 200 MHz devoted solely to interactive digital transmission.

- Repairs and preventative maintenance must be given higher priority and conducted in accordance with good engineering practices.

The City's cable system should be fully activated bi-directionally at all points.

- The cable system should be interconnected with other TCI systems in this metropolitan area, and - ideally - with other communications systems so that video and data can flow freely throughout the City as well as surrounding jurisdictions. Both the City and the greater metro area would benefit from an integrated, broadband network that can support current and future functions and work with other communications systems of different sorts.

The City's cable franchisee should support government, educational and public access.

- Public/Community Access channel capacity, facilities and equipment should be provided allowing diverse members of the public (including groups/individuals who generally have not had access to electronic media) to continue their opportunity to be sources of information in the "electronic marketplace" of issues and ideas. Public/Community Access users of the cable system should be fully supported so that programs and services they have

developed over the past fifteen years can be continued and expanded over the next franchise term.

• Educational groups should continue to have access to channel capacity for continuation of excellent higher education content sponsored and programmed by the metropolitan area's cooperating universities, and the nascent efforts of the city public schools K-12 community. Such channel capacity could also be shared with other city K-12 educational efforts as such develop during the next franchise term.

• Government Access Channels video capacity should continue to be provided, with capital and operating budgets drawn from the dedicated franchise fee payments. The channels have proven popular with both elected officials anxious to communicate with constituents, and with subscribers who appreciate in-home access to Board of Aldermen and town hall meetings, state legilstive information, local press conferences and events as well as other features.

• Government and Educational facilities should be wired for cable service to take advantage of both types of access programming and other educational video/data opportunities.

• An Institutional Network (I-Net) for government use would, to the greatest degree possible, be co-located with the subscriber network to minimize instrusion and allow the City to directly benefit from a modern telecommunications insfrastructure in its public right-of-way.

The cable system should be upgraded and its design should be flexible.

• The cable system serving the City should be designed so that it is economical to upgrade the system periodically, so that City residents can take advantage of improvements in technology.

• Moreover, as the system's commercial capacity and capabilities are improved, its "public good" uses should be improved as well. For example, if TCI enables subscribers to order movies on demand, it should also provide the equipment and facilities that would allow subscribers to request such on-demand material from public institutions, such as video instructions on voting or schedules of local events.

• As other non-video services are offered over the system, subscribers should have maximum choice in accessing Internet content. Therefore, an upgraded system should be technically capable of provision of such service by third party vendors over a cable modem platform.

Service should be timely available to all residents and businesses throughout the City.

The City is fortunate to be experiencing a development renaissance as a result of new tax laws: the downtown loft district along Locust and Washington Avenues, the Cupples Station complex, the Edision Shoe building condominium project, the Convention Center Hotel complex. Efforts to create in-fill housing have gathered speed in many outlying neighborhoods: Midtown around St. Louis University and Medical School campuses: the new Forest Park Southeast project supported by Barnes Jewish Hospital Develoment Corporation; the north side, and in the central corridor.

• Important new residential / traveller projects should be supported by the availability of cable service by the time units are ready for occupancy. Plant should be placed as these housing units are placed, again so that service can be available upon occupancy.

• TCI should reserve capital construction funds so that money is readily and timely available as these projects develop. The City has suffered in the past from shortness of funds because TCI leaves nothing extra in its quarterly capital budgets and delays in deployment of new cable plant because TCI coordinates poorly (if at all) with local developers.

City residents should receive prompt, efficient, and reliable service.

• Any future cable franchise should be subject to conditions that protect consumers and impose penalities or damages for chronic failures and patterns of problems, and especially for those issues which might be deemed incurable deficiencies after the fact .

This brief summary is not intended to be exhaustive or all-inclusive. The City's needs and interests will be more fully discussed below. The above points, however, show that the City must provide for significant improvements in TCI's current cable systems if the Board of Aldermen wishes to renew the franchise. This end must be achieved through the franchising process.

PART 2

FUTURE

NEEDS AND INTERESTS

OF THE CITY

I. HOW FUTURE NEEDS AND INTERESTS WERE IDENTIFIED

The Federal Cable Act specifies what requirements a franchising authority may establish in a Request For Renewal Proposals (RFRP). In addition to actual requirements, the RFRP may also identify community needs for which there is not a specific requirement and evaluate the operator's proposal in light of how effectively and fully it proposes to meet identified needs, whether or not specific requirements are proposed.

The City's Franchise Agency has reviewed the cable-related needs and interests of the franchise areas in detail. The basis of this review dates back to 1989, when TCI took over the two systems. Ascertainment activities were begun in 1996 and have continued through October 1999.

The Agency's working documents drew on the meetings held, correspondence and written materials assembled over the course of the renewal process to that point, and incorporated interviews, correspondence or surveys with citizens, elected officials and subscribers as well as other stakeholders who provided specific information regarding needs.

The City has also reviewed its records regarding franchisee compliance with the terms of the franchises and with applicable law, regulations, and standards. In the discussion below, past compliance issues are addressed in connection with substantive areas of the City's future needs and interests, to focus on the connection between past problems and the solutions recommended for the next franchise period. The recommended requirements and model for the next franchise term draw upon the City's and Agency's experiences over the last fifteen years. Just as the next-generation cable system itself should improve on the original design, the next-generation franchise should also improve over the first.

For over two years the Agency has attempted to engage TCI representatives in meaningful discussions of key issues regarding franchise renewal, pursuant to the informal process under the Cable Act. In particular, staff members have

attempted to review with TCI the extent and effectiveness and time lines of potential system upgrades in the context of meeting the City's needs and interests, and the potential costs of such upgrades. Plans and timetables remain vague. The Agency has discussed TCI's willingness to continue channel capacity and support for PEG Access and minority/female participation in TCI purchase of professional services and vendor products. The Agency has conducted monthly meetings with senior TCI management regarding past deficiencies, changes and planned inprovements in TCI customer service operations facilities, which would affet operations in the future..

Those discussions have been taken into account in formulating the recommendations in this Report. Since 1996, the City has also been able to draw on the experience and cooperation of neighboring jurisdictions, including St. Peters, St. Charles, O'Fallon, Clayton, University City and the Counties of St. Louis and St. Charles, which have been engaged in their own renewal processes with TCI in the same time frames as the City. Because of the location of these jurisdictions as part of the St. Louis metropolitan area, and the similarities of their issues with TCI, these communities have many needs and interests in common with the City; therfore the many potential benefits of coordinated approaches are obvious and many of the same conclusions are applicable.

In each case, however, the City has based the recommendations in this Report on the specific needs and interests of the City of St. Louis proper. Every effort has been made to incoporate all relevant data from TCI, studies by other city departments, citizen reactions and surveys, Agency documents and correspondence, current and projected costs, technical evaluations, and elected officials', city operating departments' and other stakeholders' input in the process of evaluating future cable-related needs of the City of St. Louis.

Based on these studies and investigations, the Agency has developed a detailed understanding of the future cable-related needs and interests of our community. Those needs and interests are the focus of this report, which recommends that TCI's response to the RFRP issued by the City be carefully evaluated in light of its pledges to meet those needs and interests.

A. STAFF ANALYSIS OF PAST PERFORMANCE: SUCCESSES & DEFICIENCIES

The Agency relied on extensive internal files and documents to assess future needs based on TCI's 1989 through 1999 performance.

Subscriber complaints filed with the Agency, many with verbatim comments about the past and future concerns regarding the cable system and operations Letters from subscribers expressing commendation or condemnation of TCI practices, procedures and employees

Franchise violation letters that provided notice of chronic operating deficiencies which have been detrimental in the past and are unacceptable in the future

Reports or documents required to be filed by TCI: telephone response statistics; FCC proofs of performance; subscriber notices; copies of bills; insurance and bond certificates; and

Correspondence between the Agency and TCI regarding various cable issues and concerns

B. PUBLIC SURVEYS AND INPUT

The Agency assisted the Public Utilities Committee of the Board of Aldermen in holding two February 1999 public hearings. Citizens and stakeholders expressed their experience, concerns, and viewpoints about TCI's operations in the past and how such operations should be modified in the future to correct problems and satisfy expressed needs. A videotape record of all testimony was compiled for use in this ascertainment.

Two questionnaires were distributed to attendees for their written input, with responses tabulated by the Agency to indicate trends. In addition, the record of the hearing includes letters and completed surveys from subscribers unable to attend.

Unsolicited letters to the Agency in 1999 from subscribers have painted a snapshot picture of recent subscribers' experiences and TCI operations. They are extremely pertinent to future corrective actions which would be necessary to meet citizen needs for cable services, consumer protection and customer care.

The Agency assisted the Communications Oversight Board in conducting three 1997 public focus groups for citizen, education and business interests to assess stakeholder interest in accessing City government information and electronic interaction with City departments.

The Agency contracted with Telephone Contact, Inc. to conduct a statistically valid 1999 survey of cable and non-cable subscribers. Based on the Agency's initial survey in February, the study focused on perceptions of the cable system, past TCI performance as it relates to the need for improvements going forward, and perceptions about future needs and uses of a cable system for video and advanced telecom services by residents and businesses.

C. STAKEHOLDER INPUT

The Agency sought feedback from Aldermen and elected officials to ascertain their viewpoints.

The Agency sought detailed information from Double Helix, manager of the Public Access and Local Origination channels and facility regarding condition of existing equipment, future equipment needs, operating budgets, citizen and usage patterns, community organization participation in access activities, and other pertinent factors to be considered.

The Agency requested information from Information Services, Water, Street Traffic and Personnel Divisions to gain a better understanding of their needs and plans in regards to: internal computer networks and shared databases; employee training; interaction with citizen customers via electronic means; and network control issues for street lights and water.

D. CITY STUDIES AND DOCUMENTS

Recent studies conducted by various city departments and task forces have been reviewed by the Agency to provide a clearer understanding of overall city plans and needs as they might relate to the cable system. In addition, the Agency has reviewed renewal and transfer reports and information provided by other local governments that address cable issues of pertinence to TCI and St. Louis, including future uses of broadband telecommunications, PEG Access facilities, franchise fees, network upgrades, interactive services.

COMPUTER NETWORK

As it became evident that an institutional computer network or "I-Net" would play a central role in the City's needs and interests over the next franchise term, an additional study by WorldWide Technology Inc (WWT) in 1997 was incorporated into the assessment to focus more particularly on the issues and costs of interconnecting City facilities on a wide-area network. The findings and recommendations of that study have been evaluated by the Agency in light

of the implications for, and uses of, the subscriber network to address those needs.

The Information Technology section of the City's Budget Division has made available documents, analyses and plans relating to its development of the City computer network, and provided a report on the functionality of the data channels provided by TCI under the current franchise.

DOWNTOWN

The "Downtown Now" plan released in 1999 was the product of a St. Louis Development Corporation multi-year study funded, participated in and supported by the Regional Commerce & Growth Association, NationsBank, the Mayor's Office, and the Downtown Partnership,among others. This holistic approach to revitalization of the area east of 18th Street relies heavily on advanced telecommunications infrastructure - including access to cable tv services - as a key component to attract residents and businesses.

NOTE REGARDING NEEDS RESEARCH

The source documents described above may also include additional information regarding other matters, such as telecommunications services. Under federal law, provision of telecommunications services under non-cable authorization is treated separately from provision of cable services under a franchise. Thus, this Report and the RFRP do not address such other matters. The information is retained in the source documents because it may nonetheless be important with regard to the communities' telecommunications planning aside from the cable renewal process. Only the communities' cable-related needs and interests, however, are reflected in the recommended RFRP.

E. STRUCTURE OF THE NEEDS REPORT

The discussion of future needs and interests is divided into five sections (sections II-VI below).

Section II discusses the general system design – the basic characteristics of the cable system, including reliability, quality, and two-way capabilities.

Section III addresses particular issues regarding facilities and equipment, such as interconnection with other systems; headend design; system compatibility with subscriber equipment; equipment that permits parental control of viewing; equipment required to provide emergency alert services; equipment and

facilities required to ensure adequate customer service is provided; and issues regarding future system design upgrades.

Section IV discusses construction-related issues for the system.

Section V discusses needs and interests for public, educational and governmental channels, services, facilities and equipment, in addition to the network requirements discussed in the first section, and cable service to government and educational facilities.

Section VI discusses needs and interests for an Institutional Network linking City Departments and Agencies.

Section VII discusses needs and interests for a cable system in the public-right-of-way and holding a valuable franchise to support and participate in the economic vitiality of the city through support of minorities and women in its hirng, training and expenditure policies and programs.

Section VIII discusses the needs and interests of subscribers and the City in regards to video programming and other cable services.

Section IX discusses some of the recommended provisions to be included in the Franchise Agreement and some changes that may be made in governing local law regarding cable regulation.

II. SYSTEM DESIGN AND CAPABILITY ISSUES

Under the Cable Act, as amended, franchising authorities may establish requirements for ?facilities and equipment.? In particular:

Facility and equipment requirements may include requirements which relate to channel capacity; system configuration and capacity, including institutional and subscriber networks; headends and hubs; two-way capability; addressability; trunk and feeder cable; and any other facility or equipment requirement, which is related to the establishment and operation of a cable system, including microwave facilities, antennae, satellite earth stations, uplinks, studios and production facilities, vans and cameras for PEG use.

Thus, for example, a franchising authority may determine requirements for the facilities and equipment used in the subscriber network, as well as requirements that a cable operator provide an institutional network for government use, as further discussed below. This Section II describes TCI?s current cable system;

outlines its problems and limitations; summarizes the City's needs and interests in an improved cable system; and summarizes staff's conclusions regarding the type of network that could satisfy those needs and interests.

A. TCI'S CURRENT CABLE SYSTEM

TCI operates a "stand-alone" cable system in the City; that is to say, there is one headend and one cable plant which serves the entire City and stops at the city limits. The Area II portion of the plant was originally designed and built using 330 MHz electronics over coaxial cable. After transfer to TCI, 450 MHz equipment was deployed on those system segments. The Area I portion of the plant was orginally designed and built as a 450 MHz system over coaxial cable. This 450 MHz coaxial plant can carry fifty-four to fifty-six standard analog video channels of 6 MHz each to subscribers, as well as provide 3 data channels reserved for City use.

In 1998, TCI removed individual video programming services from a few of the analog channels, and converted those channels into "digital 6 packs" to make room for digital tier programming. In other words, when TCI removed pay-per-view movie programming from 3 analog channels, it used a "compression" technology to squeeze 6 digital programming services signals onto the same 6 MHz channel that previously held one analog program service.

In both franchise areas, amplifier cascades often used as many as 24 to 41 units (with line extenders) to reach subscibers near the end of the system.

In the fall of 1998, TCI began plans to extend 3 new fiber runs north, east and south from the Delmar headend. Intended to reduce amplifier cascades along some - but not all - plant trunk runs, this new "fiber backbone" was touted by TCI as the answer to subcribers" chronic picture problem complaints.

As of August 1999, the east run (Delmar to Garrision & Olive) is operational, but evidencing on-going problems with reliability. The north run (Delmar to Lee & Penrose) cannot be completed until TCI finishes filing all the approval documentation to acquire an empty lot from the St. Louis Development Corporation for $2500. The south run (Delmar to Fyler & Kingshighway) was under construction until new aerial fiber was damaged by a City vehicle driving on a City department parking lot. Rather than replace the fiber, TCI has chosen to use a temporary run between KTVI-TV on Hampton and the former Continental headend in Overland.

The subscriber network that extends beyond (or unatached to) the fiber nodes still consists of coaxial cable and amplifiers.

Only a realtively few miles of the subscriber trunk network have been activated for upstream transmissions. This upstream capacity is used to transmit certain remotely originated video signals to the headend, and for two-way government communications from a very limited number of sites.

The headend and fiber nodes are protected against failure due to a loss of commercial power. The cable distribution system itself, however, is not completely equipped with battery backup power supplies. Thus, if there is a commercial power failure at that point, all subscribers downstream from the power loss will experience a service outage.

While TCI local managers have announced that TCI is beginning the planning and design stages of a fiber upgrade for the city system, construction will not begin prior to expiration of the franchise in October 1999, and may not begin during the extension of franchise to April 2000. It is expected that under TCI's current plans each "neighborhood node" will serve approximately 1200 homes, and that the number of amplifiers in any given run will be reduced . However, such plans are subject to changes in budgetary and operational priorities and are not confirmed for completion.

B. PROBLEMS AND LIMITATIONS OF THE SUBSCRIBER NETWORK

The inherent problems in the existing coaxial amplifier systemare exacerbated by poor maintenance practices, and effectively limit the capabilities of the existing systems. Moreover, it should be noted that neither system has been constructed with all of the capabilities required by the franchise documents for each franchise area....including full two-way capacity and system monitoring.

Specific examples of the cable systems' problems and limitations include:

Many local stations and cable networks suffer from poor signal quality when carried on this system. For many channels on the system, the reports prepared by Kramer.Inc.in 1989, 1990, 1993 and 1999 indicate that both Area I and Area II system legs have often failed to meet the Federal Communications Commission's signal quality standards, most recently 6 out of 10 test points failed FCC- required performance parameters in October 1999's technical evaluation.

The system is not equipped with the status monitoring equipment promised in "Form I" of the original 1984 franchise proposal. The absence of such equipment makes it more difficult to identify and respond to the numerous and frequent system outages reported by subscribers. The failure of a single amplifier affects all subscribers downstream from that amplifier. While the Agency had granted temporary waivers of the original status monitoring requirement due to technical difficulties with the early technology, TCI has chosen to continue to avoid implementation of that equipment, with the System Manager stating as late as 1996 that "our customers are our best status monitoring tool because they always call us when their cable goes out".

The upstream capacity of the system has not been fully activated. For example, the return path has only been activated along only a few miles of plant and only a small percent of the 853 mile subscriber network is activated for the upstream carriage of data signal or non-voice return communications. Upstream capacity between City Hall, Fire Department headquarters and the Government Access studio (required by Ordinance 61093)was demonstrated to be inadequate for video signal carriage in the early 1990s, and has not been upgraded since that test. The limited two-way capacity for data communications between City buildings has been so poor and unreliable that several City departments have abandoned that interconnection mode in total frustration. This limited upstream capacity and poor reliability has significant implications for City subscribers and governmental users of the subscriber network. Thus, at the present time, TCI"s subscriber network is technically incapable of supporting the interactive services that City had counted on in the past to reach its various facilities and buildings and will need during the term of a renewal franchise. To meet these needs and interests, TCI"s subscriber network would have to be fully bidirectional and reliable.

The 3 fiber node sizes are too large and do not even cover all of the combined Area I and Area II systems" feeder trunks. For purposes of reliability and spectrum management for interactive services, additional nodes should be deployed so than no more than six active units are in any cascade between the system headend and any subscriber.

Arguably, TCI"s system is not sufficient to meet even the City"s present needs and interests (or even its original needs and interests as specified in the current franchise documents), much less those for the next franchise term. Furthermore, the system does not meet FCC signal quality standards for all channels and nor does it comply with TCI"s current franchise obligations regarding picture quality and signal strength.

C. NEEDS AND INTERESTS: BASIC SYSTEM CHARACTERISTICS

The existing problems and limitations of TCI's system, together with the staff's review of the City's future cable-related needs and interests, shows that the City needs and deserves a cable system with the general characteristics outlined in this section. Any renewal proposal should ensure that the cable system possess these characteristics over the life of any renewal franchise. A proposal would fail to meet the City's future cable-related needs and interests if it did not ensure that the system would have the specified characteristics.

In many cases, the characteristics outlined in this section may be effectively defined by reference to a "model" cable system. For example, the City and its citizens should be served with a level of reliability comparable to that of a "hybrid fiber-coax" or "HFC" system with certain characteristics, as described below.

Thus, if TCI proposes to provide the model system, other things being equal, TCI's proposal should satisfy the requirement in question. It should be noted that TCI does not have to propose the model system in order to qualify for renewal. However, if TCI does not propose the model system, it must convincingly show that the system it does propose satisfies the City's requirements, and the City's overall needs and interests, at least as well as the model system would.

1. Needs & Interests: System Requirements

The City's technical analysis of TCI's system indicates that TCI must implement, among other things, the following requirements in order to meet the community's cable-related needs and interest. These changes are necessary to make the system perform satisfactorily.

Reduction of amplifier cascades to no more than six active components in any cascade between the headend and a subscriber, ito provide acceptable signal quality and reliability.

Compliance of physical plant with the National Electrical Code, National Electrical Safety Code (NESC), and any other applicable standards.

Segmentation of the system so that adequate bandwidth is available for the provision of interactive services. Re-use carrier frequencies on unpstream paths so that return through-put speed is increased.

• Activation of two-way transmission throughout the entire system.

2. Needs and Interests: System Reliability

The City's needs and interests include the facilities and equipment needed to increase the reliability of TCI's cable system. As discussed throughout this Report, TCI's system is highly susceptible to failures.

One indicator of the reliability of a cable system is the number of outages caused by system failures. Obviously, a network that suffers from a large number of system-induced outages cannot be considered reliable. Reliability problems, such as outages, are relatively common in the City system, with 24% of surveyed subscribers reporting 5 to 9 outages, 17% reporting 10 - 19 and 16% reporting 20 or more during the past 2 years According to the 1989, 1990, 1992 and 1999 Agency-contracted technical inspections, and staff review of TCI explanations for documented outages, the majority of outages were caused by problems with power failures, amplifiers and other system equipment. The situation is exacerbated by the fact that TCI never installed status monitoring equipment, even though such equipment is required by TCI's franchises.

Also contributing to reliability problems is the fact that the system's distribution facilities are not completely protected against power loss. Consequently, when there is a commercial power failure, service cannot be provided to subscribers that are served by the dead power supply.

Reliable service is an important ingredient in service quality for the home subscriber; the Agency is flooded with calls whenever outages occur. In addition, it is essential for public, educational, and governmental ("PEG") access users, who cannot disseminate their programming if the system does not function. Moreover, reliability will be even more important as people increasingly come to depend on the cable system for continuing, up-to-the-minute information, whether through news reports, weather information, emergency alerts, or advanced services as part of the "information highway." Finally, if governmental entities are to make effective use of the system for advanced institutional network applications, it must be more reliable.

Thus, if this Report is adopted, TCI's system must be improved to meet the City's need and interest in reliability. Ways to improve reliability could include:

• deploy more fiber in order to create a hybrid fiber coaxial plant

• reduce the number of amplifiers in cascade to no more than six.

• install status monitoring equipment which can immediately identify and pinpoint locations and causes of system outages

3. Needs and Interests: Signal Quality

The City's and subscribers' needs and interests include facilities and equipment necessary to improve the system's ability to provide acceptable quality signals.

As noted above, the system architecture used makes it difficult for TCI to provide consistent high-quality cable service and picture quality to subscribers, especially those farther away from the headend and served by long amplifier cascades. In addition, sloppy installation wiring, haphazard preventative maintenance, failure to identify/ correct breaks or leaks in the lines and unterminated ports, and poor sweep procedures will also contribute to picture quality degradation.

These difficulties are reflected in the system's frequent inability to comply with FCC signal quality standards between 1989 and 1999, that is, being unable to provide a quality picture on all channels at all subscriber locations.

As a result of these deficiencies, a significant portion of subscriber complaints received by the City of St. Louis Franchise Agency each year concern signal quality.

Thus, if this Report is adopted, TCI must improve its system to achieve necessary signal quality, including, without limitation:

• reduction of amplifier cascades;

• augmentation of fiber facilities;

• aggressive preventative maintenance program; and

• field procedures which mandate corrective action for any problem found on site (including code violations or grounding irregularities), not merely what is written on the work order.

4. Needs and Interests: Safety

The City's needs and interests include the correction of safety problems and violations in TCI's facilities and equipment. During Agency inspections throughout the system in response to subscriber complaints, and during technical inspections by the City's consultant (Kramer.Inc) in 1989, 1990, 1992 and 1999, City representatives discovered a number of deficiencies and defects that have safety implications. For instance, the system violated applicable electrical codes in a number of respects including: improper grounding and bonding; loose drop cables; damaged lashing wires; low cable wires and improper separation of cables.

Based on the foregoing, the City clearly needs to have the current safety problems corrected, and steps taken to ensure that they do not recur in the future. Meeting these needs entails changes in TCI's installation and preventive maintenance procedures. Moreover, the existence of the current problems makes clear that any future system should be designed in such a way that the necessary safety goals may be achieved without undue day-to-day effort or expense. Otherwise, TCI may be deterred by such considerations from implementing necessary changes.

Thus, if this Report is adopted, TCI should:

- re-design and re-build its systems so as to minimize maintenance needs and safety risks; and

- revise field procedures so that any safety problems are automatically addressed during the original service call (i.e. correct grounding deficiencies, re-do wiring, re-hang drop cables, etc)

5. Needs and Interests: Burden on Public Rights-of-Way

The City's needs and interests include a system design that minimizes the burden of construction, installation, and repair on the City's streets, alleys and public rights-of-way. The City's emphasis is on an universal and coordinated approach that deploys all advantages and services to all subscribers, as quickly as possible, with the least possible inconvenience to residents and businesses.

Each intrusion into the rights-of-way imposes burdens on the City and its citizens. One major burden is the cost of repaving roads and restoring landscaping after underground plant construction. While TCI can (and should)

be required to bear the immediate costs of repaving and restoration, each such repaving significantly decreases the useful life of a street. In addition, the City incurs the administrative costs of issuing permits and of coordinating and inspecting such construction work. Moreover, City citizens and other persons passing through the City suffer the less tangible, but real, costs of traffic disruption and delays during construction. Thus, the City has needs and interests in minimizing and coordinating such work, so that intrusions into the public rights-of-way need not be repeated unnecessarily.

Design choices that minimize these intrusions benefit the City. If TCI's systems are to be upgraded, especially if underground construction is involved, there is a benefit in doing so through a single coordinated process, planned carefully in advance. Moreover, TCI must ensure as far as possible that upgrade work need only be done once: if a given part of the system's plant is to be rebuilt, the rebuild must as far as possible be designed to address the City's future needs and interests for the foreseeable future, so that the work will not have to be done all over again in a few years.

It may be suggested that rather than rebuilding the system all at once, TCI could merely respond to specific market demand as it appears, or adopt an incremental or piecemeal approach to the most critically-needed improvement areas. However, such a costly and wasteful piecemeal approach would tend to require multiple disruptions (including potential interruptions of cable service) and repeated street cuts. The City has an interest in avoiding such an increased burden by requiring TCI to upgrade its system through a single, coordinated plan, rather than a series of repeated intrusions into the rights-of-way.

Therefore, if this Report is adopted, TCI's proposal should

- include a system design that minimizes burdens on the public rights-of-way, and in particular minimizes the need for repeated intrusions into the rights-of-way, as far as possible.

6. Needs and Interests: Aesthetic Issues

The City's needs and interests include facilities and equipment with the minimum (that is, least unfavorable) aesthetic impact on the City.

While TCI has built a primarily aerial plant in the majority of the City, certain areas are candiates for underground construction in order to follow utility routes which are also underground.

For example, in addition to downtown (where Chapter 23.42 of the City Code already requires all utilities, conduits and wires to be placed underground) other areas of the city are benefitting from redevelopment and new in-fill residential neighborhoods. Many of these areas benefit from underground essential facilities, rather than electric and telephone wires on poles. Along with the requirement to provide cable service to these neighborhoods, the City's aesthetic needs dictate that cable plant and drops mimic and follow the underground routes of gas, telephone, electric, water and sewer facilities.

Chronic problems with TCI wiring of buildings have been the subject of many building owner complaints. Unsightly wiring at house boxes or demarcation point, sloppy installations using the shortest route, cables crossing exterior doorways, and the like have been TCI practices in the past. These practices are not only unsafe, they are unsightly and detrimental to private property.Any renewal proposal should address TCI future practices in regards to installation routes and wiring methods on buildings because the "drop wire" is the last portion of the cable system, and the most important to the subscriber.

Thus, if this Report is adopted, TCI must ensure that its system minimizes the aesthetic impact of their presence by:

- coordination with developers for appropriate location of new facilities;

- adequate capital budgets for timely placement and deployment of cable plant before residents move into the new housing; and

- wiring practices which minimize anti-aesthestic impacts on private property (and meet applicable codes).

7. Needs and Interests: Availability of Consumer Equipment

The City's needs and interests include facilities and equipment to accommodate future options and capabilities for subscribers.

As fewer models of customer equipment compatible with a purely coaxial 450 MHz system are left on the market, the range of features and capabilities available to subscribers may decrease, placing City subscribers at a disadvantage with respect to new cable services.

The prevalence of HFC architectures in current cable rebuilds, described above, indicates that compatible customer premises equipment is likely to be widely

available over the term of a renewal franchise. This wide availability translates into low costs, because costs tend to fall as production volume rises. Further, HFC-compatible equipment is likely to offer the full range of capabilities and options for subscribers.

The City does not seek to prohibit, condition, or restrict TCI's use of any type of subscriber equipment or transmission technology. Thus, TCI may employ any type of subscriber equipment in its proposals for renewal. At the same time, however, if this Report is adopted, TCI's proposals must indicate what steps TCI would take to ensure that subscribers will not be deprived of options or features because of TCI's choice of network facilities and equipment.

8. Needs and Interests: Capacity and Flexibility

The City's needs and interests include facilities and equipment:

1. that provide a channel capacity at least comparable to that of other modern cable systems;

2. with maximum flexibility to accommodate future services and capabilities. At the time the Area I and Area II systems were constructed, a coaxial cable/multiple amplifier design of 450 MHz was appropriate.This is no longer true. New systems are now being built, and older TCI systems rebuilt, using a combination fiber/coaxial high-capacity cable design of 750 MHz or more, and delivering interactive and advanced services. Thus, it becomes likely as time goes on that new advanced equipment to support new cable services and capabilities will not be very compatible with TCI's current system. There is a danger that TCI's once-modern cable 450 Mhz system is becoming a relic supporting only limited expansion of video services through signal compression.

With the advent of multiplexing and the rollout of near-video-on-demand services, it is quite possible that the demand for channel capacity will outpace the supply of usable spectrum during the term of a renewal franchise.

At the present time, the 450 MHz system has sufficient bandwidth to accommodate 54 to 56 standard analog video (6 MHz) channels. Several of those channels have been removed from analog service in 1998 to create TCI's "digital tier" of services using compression technology to add an increased number of digital channels into each single analog channel space.

The Agency has received complaints from Subscribers to the tier about problems with operation and reception.

While his digital compression technology makes it possible to deliver a number of video signals in the same 6 MHz of bandwidth that a standard video channel occupies , the enhanced reliability and signal quality provided by an HFC system make it particularly well suited to handle fragile digital signals. If TCI were to adopt the HFC model proposed by the City, it could use the frequency range from 550 MHz to 750 MHz to deliver hundreds of digitally compressed video channels to subscribers. Accordingly, the City's HFC model has the advantage of maintaining the current channel count, until such time as digital compression or comparable technologies are utilized to provide additional channels.

An HFC architecture is also likely to be well positioned to support future cable tv and advanced services. Its widespread use in current system rebuilds nationwide encourages vendors of new services and equipment to make their products compatible with HFC standards. Unless the City system is expanded in capacity through upgrades, rebuilds and/or new transmission equipment to be flexible enough for future services and capabilities, the City will not have a state of the art or flexible system. Such an upgraded system is more likely to be able to respond to future subscriber needs and interests (for example, viewing of HDTV formats) without requiring a complete system rebuild to support a new application..

Elsewhere, TCI is going to a 750 MHz bandwidth system, typically allocating 550 MHz to analog and 200 MHz to digital carriage. Such a 750 MHz system, capable of delivering more analog channels and digital channels without the need for compression, is better able to integrate technological advancements that will increase channel capacity for both video and advanced services. This would be appropriate for the City of St. Louis.

Accordingly, if this Report is adopted, TCI should

- ensure that its proposed system design is able to adapt as flexibly as possible to future needs and interests over the term of any renewal franchises, including but not limited to the maximum 5 year renewal allowed under the 1984 ordinance. In particular, and without limitation, given the pace of progress in communications systems, any renewal franchise agreement should include a mechanism for adding or modifying facilities and equipment requirements in the light of technological change, even if the franchise term allowed is only for five years.

• propose a system design that has greater analog channel capacity than the existing system and is readily capable of utilizing new technologies to expand the total number of channels that can be delivered over the systems.

10. Needs and Interests: Interactivity

The City's needs and interests include facilities and equipment that make the cable system fully interactive.

As of August 1999, only limited miles of the system's trunk cables were activated for upstream transmissions. These limited "interactive" segments are used to deliver certain remotely originated signals (e.g., Government access and K-12 educational access programming) to the headend and provide a rudimentary two-way data network between a limited number of city buildings. Aside from these few circuits, the system is not activated for two-way transmissions, although the original franchise required a cable plant capable of two-way activation throughout the system.

a). Two-way Interactivity for Subscribers

Under the Cable Act, subscriber interaction that is required for the selection or use of video programming or other programming service is included in the definition of "cable service." Traditional cable programming has been a one-way street: a subscriber receives but does not send, and is thus unable to interact with the programming.

In the City, analog Pay-Per-View programming was provided through subscriber converters using a downstream path after the subscriber had phoned to order the PPV event. Once TCI moved PPV to the digital tier, such events are only available to digital subscribers, using an upstream telephone return path to "read" and verify digital services (including PPV) delivered to subscribers.

The last few years, however, have seen a marked interest in interactive applications, where a subscriber or user plays a more active role. Some interactive applications are institutional in nature and are discussed in connection with the I-Net below. Others, however, may involve general home subscriber usage. Pay-per-view or Video on demand, in which a subscriber requests a particular program using the cable system, are two such applications. Another such application would be the use of a cable system to download information requested by the subscriber.

A more advanced use of the system would involve Internet access over a cable modem platform, by-passing traditional dial-up telephony Internet access to call up, navigate through, and download information (which may or may not include video information).

Regardless of the availability of such advanced services, to the extent that such interactive services involve the one-way transmission to subscribers of video programming or other programming service, and the subscriber interaction needed to select or use such programming, they may appropriately be considered in connection with TCI's cable franchise.

b). Two-Way Interactivity for Institutional Stakeholders

Several stakeholders in the City have identified needs for interactive networking over the cable system:

(i.e.) City operating departments and elected officials have emphasized the need for reliable data communications transmission and shared database access over a closed computer network. As with the needs described above, this type of application will require a subscriber network that is fully bi-directional.

(i.e.) The Board of Education has indicated that it wants to provide Internet and intranet access to elementary, middle and high schools. One method of making Internet and intranet services available to schools is to utilize high-speed cable modems. However, to use the cable modems in this manner, the subscriber network would need to be capable of providing two-way service at a minimum speed of 10 Mbps. If this Report is adopted, TCI's system should be capable of providing the facilities and equipment necessary to enable interactive use of the entire system, at least to the extent that interactive applications constitute cable service. These steps include:

• reduction in the number of amplifiers in cascade and segmentation of both systems, in order to reduce electrical noise. This concern is particularly important for interactive service, because an upstream signal reflects the noise contributed by all the amplifiers whose signals are collected to arrive at the headend along a given line, while a downstream signal need only cope with the noise from amplifiers along its direct path. Since noise in the upstream direction is due to all amplifiers feeding into the node, segmentation is required to reduce the total amount of noise. Such segmentation increases the upstream bandwidth available to each subscriber without requiring additional bandwidth on the system as a whole, because the same frequency bands may be reused from node to node. In effect, the upstream bandwidth becomes a function of the

total bandwidth assigned to upstream transmission on the system, divided by the number of subscribers per node.

• a return path of at least 128 KHz per subscriber. This bandwidth should provide an average maximum capacity of approximately 128 Kbps upstream, comparable to the basic ISDN upstream rate now available over ISDN telephone lines, for the subscriber interaction needed to select or use cable services.

• making any improvements necessary to ensure a clean return path from all locations.

11. Needs and Interests: The City's Anticipated Redevelopment Growth

The City's needs and interests include facilities and equipment sufficient to provide for the City's anticipated redevelopment and growth, briefly discussed above.

Over the course of TCI's franchises, the City has experienced fluctuations in population counts and demographics, shifts in the location of its residential population, as well as changes in the infrastructure needed to support such a population and the services those populations demand. Further growth is expected over the coming years as a result of federal tax laws favoring inner city, downtown and historic area redevelopment. The expected changes in people, businesses, and activity within the City tends to accentuate all the needs described above. For example, as population density rises in redeveloped areas, including downtown, TCI's system must be further extended to serve these people. Without changes in the design of each system, this would require more amplifiers, more potential failure points and more aerial or ground clutter (e.g., equipment pedestals) along major routes. Thus, the City's redevelopment adds urgency to the needs and interests set forth above.

D. REQUIREMENTS AND MODEL SYSTEM DESIGN

Based on the above needs and interests, the accompanying draft RFRP identifies:

(1) certain requirements for facilities and equipment that are necessary in order to make TCI's current system perform satisfactorily, and

(2) a model showing how a proposal could embody further features that would meet the City's future cable-related needs and interests, taking into account the cost of meeting such needs and interests.

If this Report is adopted, in addition to meeting the corrective requirements listed in the RFRP, TCI should indicate its willingness to provide facilities and equipment meeting the needs and interests outlined above. While the original design of the systems was state-of-the-art sixteen years ago, it is no longer able to satisfy the City's future cable-related needs and interests, any more than a sixteen-year-old computer could be expected to run next year's applications. An upgrade is necessary.

There is more than one way to upgrade TCI's cable systems. Some of those may methods may allow for delivery of non-cable services such as telephony. However, non-cable services are not a concern or discussion point in this review. A successful renewal proposal, therefore, should indicate an upgrade path that satisfies the community's cable needs and interests. The following model for an upgrade of TCI's system shows how this might be done in a way that meets the City's needs.

TCI may wish to propose a different way of meeting the City's needs and interests. If so, however, it is essential for TCI to show that its proposed system would meet those needs and interests at least as well as would the model. The model thus provides a benchmark or reference point against which TCI's proposal may be tested.

1. Current Cable Technology

In terms of solutions that are readily available and affordable today, the key improvement necessary to meet the City's needs and interests is to replace more of TCI's coaxial distribution system with fiber-optic cable. Although TCI has taken modest steps to improve the system by installing limited fiber overlays, (south and east runs) more extensive use of fiber optics is required if the system is to be capable of providing the types of services required by the City, PEG entities and subscribers. Fiber expands the capabilities of cable systems because it transmits signals using coherent light, rather than electricity. Optical signals requires less amplification than traditional electrical signals and are subject to less interference (noise). Thus, in most wireline applications, fiber cable has significant advantages over copper or coaxial cable.

The cost per mile of installing fiber is now competitive with that of installing coaxial cable, about 5 cents per strand per foot or less. The primary cost difference comes at the point where the fiber ends, because the equipment necessary to convert optical signals back to electrical signals for use by televisions, telephones, and computers is not required by coaxial cable. Thus, a "fiber-to-the-home" design would be more costly than a coaxial system, because conversion equipment would be needed at every home. A reasonable compromise, developed in recent years by the cable and telephone industries to provide the best service at the least cost, is the "hybrid fiber-coax" or "HFC" system discussed in this Report and the attached RFRP. HFC uses fiber for the main trunk lines, but traditional coaxial cable for the last leg of transmission to the home. Cable systems being built today use fiber trunk and distribution lines to carry signals into neighborhoods, to a point called a "node." At the node, signals are converted from light to electricity and routed onto coaxial cable, from which individual locations are served. As long as the distance the coaxial cable must carry the signal is limited (so that the system does not use many amplifiers), a single-cable HFC system can deliver high-quality, high-speed signals to the home, and provide enough two-way capacity to send video and data from the home to various locations on the cable system.

For institutions such as the City's public facilities, on the other hand, it makes sense to bring fiber all the way to the individual site. The high volume of information traveling to and from such a location makes it cost-effective to avoid the bottleneck of coaxial cable altogether by connecting the building directly to the node via fiber. In fact, such sites " schools, libraries, city buildings " may provide ideal locations for the nodes that also serve surrounding residential districts. To the extent that dedicated fibers to institutional network users may run together with HFC fibers to nodes, substantial economies of scale may be achieved in combining the HFC rebuild of a subscriber network with the construction or rebuild of an I-Net.

The current standard in cable system installation is fiber to the neighborhood, with a bandwidth or capacity of at least 750 MHz. For example, the FCC's 1995 "social contract" with Time Warner required the company to upgrade at least half of its cable systems nationwide to at least 750 MHz. Thus, a 750 MHz single-cable HFC system is a relatively modest requirement in today's cable industry.

2. Characteristics of the Model

The attached draft RFRP sets out characteristics of an ideal model system design in detail. The following list highlights certain key features of the model.

• Based on the City's understanding of the technology , a fiber optic backbone design of 500 or less residences, businesses and other structures served by any single fiber optic node. Is ideal This type of extensive segmentation is often referred to as "fiber-to-the-neighborhood." A node size of 500 homes should make it possible to reduce the number of amplifiers in cascade to six or fewer. The system design ultimately adopted by TCI should allow segmentation so that services can be tailored to subscribers

• No more than six active components in any cascade between the headend and a subscriber.

• 750 MHz system using active components rated for at least 750 MHz, and passive components rated for 1 GHz so that TCI's systems can later be easily and economically upgraded by merely switching out the active components, without relaying cable or causing serious disruption of public rights-of-way.

• Redundant routing between the headend and each fiber optic node to ensure greater reliability.

• Two-way (bi-directional) activation. The model system proposes a clean return path of at least 128 KHz per subscriber for the selection or use of cable services. A clean return path for upstream video must meet FCC technical standards for downstream video; a clean path for data requires a carrier-to-noise of 23 dB and a carrier-to-distortion of 25 dB.

• Segmentation of the system so that adequate bandwidth is available for the provision of interactive services. Re-use carrier frequencies on upstream paths so that return through-put speed is increased.

• Protection against outages due to power failures of up to four hours' duration occurring anywhere in the distribution system. Back-up power supplies are located at each node and amplifier and at the headend.

• Status monitoring equipment that monitors the cable system's performance or equipment of equivalent functionality .

• To the extent that other facilities or equipment may be needed to cure any violations of FCC technical standards or problems identified during the renewal

process, and to prevent such problems from recurring in the future, the model includes such facilities and equipment as well.

The above characteristics have been researched and identified as meeting the City's needs , but the City is not requiring this model, and anticipates that TCI's proposal may differ from the model herein. To the extent that TCI's proposed model differs from the City's:

- TCI should explain its design philosophy to the extent different from the model.

- TCI should explain in detail how its proposed model provides functionality and reliability that is at least equivalent to the City's model.

3. How the Model Meets the City's Needs and Interests The model upgraded cable system meets the City's needs and interests, as specified above, in the following ways.

Reliability: The fiber architecture proposed by the City is more reliable than a system which uses a substantial amount of coaxial cable. This is because the electrical signals in a traditional coaxial cable system attenuate as they travel through the cable and must be amplified frequently. Every amplifier represents a possible point of failure, cutting off service to all subscribers "downstream" from the amplifier. Thus, to the extent that TCI's system still use long cascades of coaxial amplifiers, there is a serious reliability problem. The light traveling through a fiber-optic line, by contrast, loses strength far less quickly and generally does not require amplification. Thus, a system using fiber at the levels described in the model sufficient to eliminate most of the amplifiers along any given route between the headend and the home would be highly reliable. Furthermore, the model system described in this Report and in the RFRP ensures system reliability by requiring standby power sources at all subscriber network locations that are necessary to maintain service to subscribers.

Signal A fiber-based system delivers a much higher-quality signal than copper better Quality: pictures, clearer sound, and less error-prone data. This is because each amplifier in the coaxial cable tends to add noise and distortion, and also because the signal in coaxial cable is subject to electrical "noise" and static from outside sources, such as electric appliances, while fiber is not.

Minimizing the number of active components (such as amplifiers) in cascade, and maintaining and replacing plant where needed, will minimize outside electronic interference (ingress) to ensure the best possible signal quality. This signal quality is important for traditional entertainment video. In addition, high signal quality is necessary in both the forward and reverse direction for two-way data applications. For instance, government facilities using the subscriber network for Internet access and internal computer communications require a consistently high-quality signal. If signal quality is low, the bit error rate increases, and network efficiency decreases.

Safety: The model cable system is compatible with sound maintenance practices. To the extent that aerial plant is raised to meet code, it is less likely to interfere with vehicular and other operations in streets and alleys, therefore minimizing the cost of maintenance and repair to TCI, and thus the incentive to cut corners.

By placing some of the plant underground where other utility conduits and wires were also required to be placed underground, aerial tresspass issues are avoided across streets, alleys and driveways downtown and in newly developed areas of the city.

By utilizing fiber cable for backbone and by reducing the number of active components, fewer appurternances (together with their pole and strand location problems) will occupy or block aerial right-of-way.

Burden on The model contemplates a single, planned upgrade to bring TCI's system up to Right-of-Way: date and equip it for the next franchise term. To the extent further improvements are necessary during future franchise periods, the flexibility of an HFC system described by the model should minimize the burden of future upgrades. On the other hand, as discussed above, if TCI were to propose system improvements only on an ad hoc or piecemeal basis, the construction and interruption burden on the City's rights-of-way would be greater than for a single, one-time system upgrade. Any TCI proposal must address the disadvantages to the City of piecemeal improvements and clearly identify advantages to the City that would offset these disadvantages.

Moreover, incorporating a specific upgrade schedule in a renewal franchise agreement allows the City to ensure, commensurate with federal law, that rebuilding or upgrading of TCI's system does not disadvantage certain areas or groups of subscribers through timetable-based "redlining."

Flexibility: Similarly, the mainstream nature of an HFC architecture and the highly versatile fiber backbone should ensure that the system can carry a wide range of services with almost unlimited capacity. Accordingly, an HFC system is likely to be well positioned to support new services and functions (with, of course, concomitant new potential revenue streams for the cable operator). Any alternative proposal must, at a minimum, be at least as well positioned in these respects.

Aesthetics: Replacing certain segments of TCI's coaxial distribution systems with fiber, as described in the model, would reduce the number of amplifiers necessary to serve City subscribers. Because fiber can carry much more information than coaxial cable of the same cross-section, distribution lines in the model system could in principle be physically smaller than the current lines (although in practice such an advantage might be partially or wholly offset if TCI were to install the fiber by overlashing it to aerial plant, or bury it next to underground plant, without removing the existing coaxial trunks). Therefore, the design of the system must minimize impact of the system on the public rights-of-way and on subscriber residences.

Availability The mainstream nature of a rebuilt HFC architecture should ensure that customer of Consumer premises equipment compatible with the model system will be available over the life Equipment: of any renewal franchise.

Capacity: The model increases the information-carrying capacity of the cable system by segmenting the system into 500 Unit (or less) neighborhood nodes. This permits the same frequencies to be reused in different nodal areas, in much the way cellular telephone frequencies are reused in different cells: each node can assign the same range of frequencies to a different set of programming sources. Thus, an HFC system is well suited to "narrowcasting" of programming to particular interest groups or other groups of subscribers. Assuming that all TCI systems in the metropolitan area are rebuilt in the same fashion, served from one head end and interconnected, this type of segmentation becomes even more important so that city subscribers can continue to receive city-specific programming.

Interactivity: By minimizing amplifier noise and segmenting the return path, the model system makes available sufficient upstream capacity to meet the City's need for a system that can support interactive cable services and a two-way Institutional Network.

Growth: The model system is well designed to grow both in extent and in density. In the model, and in any proposed system, care must be taken to

configure the plant in such a way as to provide for later growth. For example, it may be necessary to pull additional fibers to an area that is currently served by a single node, but may require multiple nodes, with their own separate fibers to the headend, in the future. The small incremental cost of additional fibers when a fiber line is being installed makes an HFC design well-suited to this purpose.

III. OTHER GENERAL FACILITIES AND EQUIPMENT ISSUES

A. NEEDS AND INTERESTS: INTERCONNECTION

The City's needs and interests include facilities and equipment that provide the ability to interconnect with other cable systems and communications network and cable-like "open video systems" that are operating or may be deployed in the future in this area.

Cable systems are no longer isolated enclaves. Rather, they enable subscribers and other users to gain immediate access to information from both within and outside a franchise territory. Satellite feeds and national networks already link cable systems to the world at large. In addition, cable modems allow a cable system to serve as a high-speed conduit for data and video delivered over the Internet. The City must be able to ensure that unique information and programming carried or provided on other local systems, both inside and outside the City " and in particular, PEG programming " are universally accessible to City subscribers, agencies and educational institutions. Thus, the City needs to continue to require the TCI system"s interconnection with other area systems and networks during the term of a renewal franchise.

In this regard, the City has identified several interconnection arrangements which would satisfy the community"s cable-related needs and interests. Each arrangement is discussed below.

1. Subscriber Network to Internet.

An upgraded TCI subscriber network could be interconnected to the Internet to make possible high-speed access from cable subscribers" locations, including those of governmental, residential, educational and business subscribers.

Given the resident student populations associated with two major universities, (many of whom live in dormatories served by cable tv "bulk accounts") not to mention 2 teaching hospitals, a community college and a teachers" college inside the City limits, the high data speeds possible through cable system

modems seem attactive for serious educational pursuits, which require downloading of complex, even moving, images in a timely manner.

The St. Louis Community Development Corporation and Downtown Partnership have indicated that the presence of multiple high-speed telecommunications alternatives has become a critical factor in their plans to promote the viability of downtown rejuvenation...both commercial and residential.

Given the limited deployment and availability of telco-offered high speed Internet Access over DSL lines, high-speed cable modems offer an attractive competitive alternative for citizens wishing access over faster platforms that dial-up 28.8 computer modems, whether they are cable video subscribers or not.

To the extent that Internet access falls within the definition of "cable service" in the Cable Act, the RFRP may address this potential use of the cable system as part of the City's cable-related needs and interests. If such services are offered, the Operator mut comply with all rules, regulations, terms and conditions established by the City for provision of such services.

2. Subscriber Network to Area-wide Cable Networks and Program Sources.

To facilitate current and potential future sharing of PEG programming, the current interconnection between City and County cable systems should be improved and upgraded from coaxial to fiber optic cable to improve delivery. The Higher Education Channel (programming on which orginates in the County), new or expanded Public and Community Access Channels, and City Educational Channels (which may wish to draw on elementary and secondary school K-12 programing available outside the City) would benefit from metropolitan-wide video interconnects to sources for such programming.

Thus the need for reliable institutional reception (and delivery to subscribers) of such programming is a City interest that could be effectively addressed in TCI's proposal.

3. Institutional Network to Internal and External Communications Systems.

Communities, institutions and local governments in the Missouri-Illinois metropolitan area share many interests and concerns.

For instance, area crime reports are of concern both to the City and nearby surrounding jurisdictions. In these areas, there is an important need to disseminate and share databases and information about criminal investigations.

For instance, shared regional public health facilities dictate the Health Department's need for effective and reliable connection to state and regional health agencies' computer networks.

For instance, the City's need to link police stations located throughout the City with court facilities in order to facilitate the transfer of prisoner records, photographs and other information and the City's need for video-conferencing between police and fire department headquarters, and individual police and fire stations, dictate that an Institutional Network have secure firewalls to protect sensitive data.

For instance, the Street Department has received federal funding to reduce traffic pollution and congestion, putting into place miles of its own fiber optic transmission cables to monitor and control traffic flow. Connection of this system to the City's Institutional Network would be beneficial in promoting efficiency of analysis and response.

Thus, there is interest in interconnecting with other metropolitan area communications systems and databases both inside and outside the City.

TCI proposals should address how TCI would assist the City to interconnect its databases with those of other jurisdictions served by TCI (and any govermental institutional networks) meeting a recognized need for more effective regionalization outlined by the 2004 planners in their recent studies.

4. City Institutional Networks Internet.

Many City departments and agencies have stated that they use the City computer network as their gateway to the Internet. In this capacity, the I-Net would be used to post and retrieve information quickly and efficiently. The St. Louis Development Corporation, for example, is interested in using the I-Net to establish and update Web-pages featuring city departments, contact names and phones, event calendars, press-releases, etc. Therefore, an expanded I-Net must be capable of interconnecting with the City's existing Internet portal.

MODEL FOR MEETING INTERCONNECTION NEEDS

Therefore, based on the needs and interests discussed above, if this Report is adopted, TCI's proposed system (including the integrated I-Net) should be judged against the model :

- designed so that it is able to interconnect with other area communications systems in the St. Louis metropolitan area).

- interconnected with other cable systems or similar communications systems in the surrounding counties and municipalities. Each interconnection would include at least the facilities and equipment required to allow video and data signals to flow seamlessly across all facilities for each system on any channels on the institutional network and to channels on the subscriber network dedicated for public, educational and government use. This will permit access programming placed on a system in a separately franchised area to be shown in other franchised areas within the metropolitan area, given appropriate agreements among the parties involved. The interconnected systems could operate as a single, integrated network for Public and Education Access and for certain I-Net purposes.

- capable of interconnection with any open video system in the City, to the extent necessary to ensure that all open video system subscribers could receive educational and governmental access channels whose operations are not solely funded by TCI and public or community access channels if such other video system entities contribute to suport of same under agreements with TCI.

- able to connect the I-Net to the Internet via the City's portal.

- able and prepared to interconnect its system (including the integrated I-Net) with other telecommunications systems in the area.

- designed so that video and data signals can be transmitted between City Hall and municipal I-Net sites across the institutional network

B. NEEDS AND INTERESTS: HEADEND DESIGN

The City's needs and interests include certain headend facilities and equipment. Currently the City system is served by its own headend at Delmar and Euclid Avenues. Certain capabilities are available at this headend, including feeds from PEG studios, and facilities to accommodate Emergency Alert Overrides. TCI current business plan seems to call for consolidation of headends throughout the region, with different "insertion" nodes within

franchise area systems to insert programming particular to that franchise area. One such node has been proposed in the4900 block of Washington near the current headend. Current functionalities particular to this system must be preserved, even if TCI changes its system design in the context of metropolitan-wide service.

MODEL FOR MEETING HEADEND DESIGN NEEDS

Accordingly, if this Report is adopted, TCI should ensure that its headend meets the needs and interests determined by the City. In order to satisfy these needs and interests, TCI's headend(s):

- must accommodate Emergency Alert System (EAS) equipment, as discussed below.

- must have space available to accommodate the switching equipment necessary to make interactive cable services possible.

- must accommodate any I-Net equipment needed to satisfy the City's needs and interests.

- must install equipment at headends that allow it to receive and cablecast signals in substantially the form received, e.g. Headends must include equipment that transmit in color video signals received in color; transmit in stereo audio signals received in stereo; and transmit signals with a secondary audio signal in such a way that the secondary audio signal can be received. To the extent that TCI switches from analog to digital signals for any PEG programming channels and feeds, TCI should be responsible for purchasing equipment at both ends of the feed that is necessary to accommodate TCI's self-selected mode changes.

- to maximize system reliability, should possess backup power allowing at least four hours' operation in the event of a power failure.

- designed so that the City can install (co-locate) equipment at the systems' headends and control centers and otherwise connect that equipment to the systems, to whatever extent may be required to permit full use of the capacity designated for public, educational and government channels and the government Institutional Network.

- designed so that other users can also co-locate facilities at the systems' headends and control centers and otherwise connect equipment to the systems,

to whatever extent may be required to permit full use of the capacity designated for public, educational and government channel and Institutional network use, as well as any future mandated use by other providers using a broadband platform.

C. NEEDS AND INTERESTS: SYSTEM COMPATIBILITY WITH SUBSCRIBER EQUIPMENT

Federal statutes and FCC regulations impose requirements regarding system compatibility with subscriber equipment. Among other things, such federal requirements are designed to address the problem that subscribers may be unable to take advantage of certain features of their equipment, such as picture-in-picture or the ability to watch one program and simultaneously record a different program, due to the use of cable converters. City subscribers have a strong interest in such compatibility. Some complainants, for example, have expressed frustration with their inability to record one channel while watching another on the digital tier.

As required by federal law, the City does not prohibit, condition, or restrict TCI's use of any type of subscriber equipment or any transmission technology, and thus does not establish specific requirements in this Report or the draft RFRP.

MODEL FOR ADDRESSING COMPATIBILITY ISSUES

TCI's proposals in response to the RFRP should specifically address and describe how TCI would ensure that the above needs and interests will be met. For example, one way to address this issue would include:

- TCI's proposed timetable for introduction of facilities and equipment fully compatible with the feautures of other subscriber equipment, showing how such timetable meets needs and interests identified above

- the types of subscriber premises equipment currently used or proposed for use (including model name/number, levels of functionality, capabilities and limitations of each type of equipment specified with respect to compatibility with other subscriber equipment) and projected approximate monthly rental price to subscribers of each type of subscriber equipment for the first and second year of a renewed franchise.

• the types of subscriber premises equipment currently in use which TCI proposes to discontinue using or phase out during a 5 year renewal period, inlcuding model name/number, levels of functionality, capabilities and limitations with rrespect to compatibility with other subscriber equipment.

• any types of programming which cannot be accessed by individual models of equipment

• a detailed explanation showing how the selection of types, capabilities and prices to be offered meet the needs and interests identified above

D. NEEDS AND INTERESTS: EQUIPMENT FOR PARENTAL CONTROL OF VIEWING

The City's needs and interests include facilities and equipment that provide for parental control of viewing. The City's residents, like those in many other jurisdictions, have expressed needs and interests in preventing minors from accessing inappropriate material. Federal law requires that TCI provide (by sale or lease) devices by which a subscriber can prohibit viewing of a particular cable service during selected periods, and that TCI block a premium channel upon a subscriber's request. TCI must also refrain from providing any cable services that are obscene.

MODEL FOR PARENTAL CONTROL

Thus, if this Report is adopted, TCI must meet this need by

• providing such parental control devices to any subscribers who wish to eliminate any objectionable programming from the cable services entering their home.

E. NEEDS AND INTERESTS: EMERGENCY ALERT SYSTEM

The City's needs and interests include facilities and equipment that enable TCI's system to be used for emergency alerts.

Since December 31, 1998, cable operators have required to transmit national emergency alert messages both in audio and video on all channels. The City, however, also needed the ability to transmit local emergency messages, and

established the requirement during the previous franchise because federal requirements alone, however, do not establish this capability.

Under previous franchise requirements, TCI's cable system provides a means of quickly communicating a City-wide alert generated by CEMA (City Emergency Management Agency) in case of emergencies. This feature has proved useful and is a valuable component of emergency response by police fire and city department officials. The City must therefore continue to include such a requirement in a renewal franchise agreement and TCI must continue to provide facilities and equipment that allow City alerts to be transmitted in the same manner for example, audio and/or video overrides as federal alerts.

MODEL FOR MEETING LOCAL EAS NEEDS

Thus, if this Report is adopted, TCI must ensure that its system continues at least the following characteristics:

install equipment required to transmit the emergency audio and video (including text) messages to the headend and onto the subscriber network, from a location designated by the City, with dedicated connections from that location to the headend.

system designed so that authorized officials can activate the emergency alert system over a dial-up telephone line, from CEMA and selected key I-Net sites. Such officials must be able to transmit:

(i) a prerecorded audio and/or text message using the dial-up telephone access;

(ii) a live audio message via the dial-up telephone connection; and

(iii) audio, text, graphic maps, and/or video from any I-Net site.

emergency alert system must be designed to be adaptable to support more advanced forms of connection (for example, via the Internet) as such advanced forms may become available.

emergency alert system must also include security features to prevent activation of the system by unauthorized persons (e.g., through the use of security codes).

• such equipment should allow authorized officials to send both prerecorded and live messages over the channels in several languages, should that become necessary in the future based on changes in City population demographics during a renewal period.

• the system in the City should be designed so that an emergency message originated in one of the surrounding jurisdictions can either be blocked or retransmitted in the City (or vice versa), as authorized officials find appropriate at the time.

• the system must be designed so that, during an emergency, the operator does not need to take any action before local officials can activate and use the system.

F. NEEDS AND INTERESTS: EQUIPMENT REQUIRED TO PROVIDE ADEQUATE CUSTOMER SERVICE

The City's needs and interests include facilities and equipment to ensure that adequate customer service is provided.

As discussed further in Section VI of this Report, the City needs to be able to:

(i) ensure that TCI provides prompt and effective service to its customers; and

(ii) determine whether TCI is complying with applicable customer service standards.

TCI must employ the equipment required to solve problems as they occur, and to conduct an ongoing and effective program of preventive maintenance.

Cable television subscribers in the City have suffered from recurrent service problems with telephones.

For instance, the system has failed to provide consistently acceptable telephone access to consumers during the 11 years of the past franchise term. Of 1,106 Subscribers surveyed by Telephone Contact in October 1999, 40% rated "the ease and convenience of contacting TCI by telephone " as "poor" and 27% as "Only Fair". Subscribers reporting "Excellent" totaled only 6% and those reporting "Good" 26%, representing a less that 1/3 positive response. In particular, based on reports from subscribers, the Agency concluded that the

system has experienced high numbers of "calls on hold" for excessively long periods (more than 10 minutes) and extremely high "busy signal" percentages an inordinate amount of the time. TCI was placed on notice of franchise violation for these problems in 1996 and 1998.

It is also evident that the system has not complied with the FCC's minimum telephone answer time requirement for numerous monthly periods since 1989, according to the Agency's own experience, and reports submitted by TCI as required under Ordinance 61093. It should be noted that, at least for a period of time prior to May 1999, gauging compliance was very difficult, if not impossible, because TCI stopped measuring and generating reports for selected required statistical information.

In May 1999, TCI moved offices and switched to a newly installed and more sophisticated telephone system. TCI insists that the monitoring abilities of the phone system will allow it to provide better statistical information about telephone performance, including average length of "hold times", percentage of calls "abandoned" by the caller and percentage of busy signals received by callers attempting to reach TCI.

Since May, 1999, subscriber complaints about routine telephone access have dropped. However, whenever an outage occurs, the phone lines are still jammed, an all too frequent occurrence. It should be noted that TCI's ability to respond to outages is hampered by the fact that a status monitoring system has never been installed to track outages and that TCI has not yet established a cusomter-friendly procedure of putting outage information on an automatic telephone message while an outage is in progress.

These experiences underline the fact that the cable operator must not only be able to achieve the necessary service level, but be able to to demonstrate conclusively that it has done so.

Thus, to rectify the foregoing deficiencies and other customer service problems, and to ensure future compliance with City standards, TCI must provide certain facilities and equipment to meet the needs and interests identified above, if this Report is adopted.

To the extent that TCI's system relies on subscriber complaints to detect outages and initiate repairs, there is an unavoidable delay in responding to a system problem. TCI can respond more quickly and accurately if the system incorporates the originally required status monitoring equipment that alerts

employees to and pinpoints problems with amplifiers and other active equipment.

MODEL FOR MEETING CUSTOMER SERVICE EQUIPMENT NEEDS

As noted above, it was and is difficult to measure compliance with telephone answering standards and similar customer service requirements unless TCI installs the equipment necessary to measure performance, and maintains the necessary records. The City needs to ensure that TCI utilizes telephone equipment for customer service that permits TCI and the City to track busy signals, answering time, abandonment rates and transfer time in such a way as to determine whether all applicable customer service standards for such events are being met.

If this report is adopted, TCI's proposal should describe in detail and demonstrate:

- the performance capabilities of its telephone system to service the City;

- its ability and commitment to internally measure telephone performance and to contract with its telephone service provider for any measurements and studies that cannot be internally generated;

- its proposal for installing status monitoring equipment that: (i) permits it to determine remotely the status of the system's headend and plant; and (ii) alerts on-duty personnel in the event of a failure; and

- its proposal for communicating with subscribers through voice messaging when operational situations such a outages or other occurrences overload the phone system.

G. NEEDS AND INTERESTS: FUTURE UPGRADES AND CAPACITY OF SYSTEM

The City's needs and interests include a provision for facilities and equipment needed to ensure that future needs and interests of subscribers are met as they arise.

Communications technologies and communications needs are subject to rapid and continuing change. To ensure that TCI's system can continue to satisfy the City's needs and interests throughout term of a 5 year renewal franchise,

TCI must ensure that its systems continue to have the necessary capabilities throughout that term.

Given the fact that (despite announcements to do so in 1993, 1995, 1996 and 1998) TCI has not completed designs, let alone construction, for activating the city-wide upstream capabilities of the system,nor provided interactive services being offered in selected other TCI markets, nor even completed the limited fiber deployment to reduce amplifier cascades at three points in the system, the City cannot necessarily rely on TCI to voluntarily expend capital dollars to keep pace with technology.

Thus, any new franchise agreement should include mechanisms that permit the City to require TCI to upgrade its system so that it continues to serve community needs throughout the term of a renewal franchise.

In a relatively short franchise term ? for example, the maximum 5 year renewal period permitted under the 1984 current franchise ? the problem of outmoded technology may not arise if TCI is generally required to maintain and improve its existing facilities in accordance with good industry practice, and consistent with its plans to upgrade the cable system during a renewed franchise term.

The normal renewal review at the end of such a franchise term (2005) would allow the City to revisit the changes in technology and the market, as well as its changing needs and interests, in the near future. Equally possible (given the trend towards consolidation of able operators into regional systems and markets) would be a review at any proposed transfer of ownership during the maximum 5 year renewal, because such transfer may result in a franchise term longer than the balance of the renewal period. At either of those times, the City could reasonably require a ?2005 renewal upgrade? mechanism permitting it to establish new requirements for system design based on technological change.

However, any upgrade disrupts the public right-of-way, both in terms of use by others and in damage to streets whenever they are opened. Therefore the preferred approach is to build plant with a capacity for 25 year flexibility, in order to protect the public from massive interruptions due to repeated construction. Given that TCI is currently considering an upgrade that serves 1200 homes per node, and the most effective industry standard is 250 homes per node, flexibility for expansion becomes more important. Any current upgrades should incorporate the possibility of additional fiber line and node deployment over a 20 year period, in addition to the potential 5 year renewal period.

MODEL FOR ADDRESSING FUTURE UPGRADE NEEDS

TCI should address the issue of repeated upgrades to improve plant as part of its proposal. If this Report is adopted, the following model will, other things being equal, satisfy this need

- If the term of a transfer franchise exceeds five years, or at the end of the 5 year renewal period, the City must be able to establish specific requirements for additional or new equipment and facilities (including PEG facilities and equipment, to the extent required by design changes made by TCI), and for an upgrade or rebuild of the system, based on changes in technology, conversion to a fully digital system or other technical factors

- To ensure that the subscriber network remains capable of meeting community cable-related needs and interests, and of providing high-quality service throughout the community, even if TCI proposes an upgrade with 1200 homes per node, the plant should be designed in such a way that nodes of 250 to 500 homes are possible without a complete rebuild of the system and its related impact on the right-of-way.

H. USE OF EQUIPMENT AND FACILITIES

Federal law limits the City's ability to establish requirements for individual video programming services or other information services in a request for renewal proposals. Thus, if this Report is adopted, the City will not require TCI's proposal to include particular program services or facilities, except to the extent permitted by federal law (for example PEG or Leased Access programming).

However, the City is interested in knowing the overall quality, mix and broad categories of programming TCI plans to offer on the system.

Also, a notable percentage (36%) of citizens surveyed indicated a degree of interest in the availability of broadband services over a cable platform, rather than through traditional dial-up telephony. Given limitations of telephony DSL technology and deployment, needs and interests of the residents of the City would be well-served by another high-speed service available in this market.

Therefore, if this Report is adopted, to meet community interests, TCI's proposals should address the following:

- TCI's timetables for deployment of broadband services in this market in light of perceived community needs and expressed interests of residents;

- TCI's agreement that broadband internet services may be regulated consistent with Title VI of the Telecommunications Act of 1984 as revised by federal acts of 1984, 1992 and 1996 and TCI's acknowledgement of the City's authority over Title VI services;

- TCI's agreement that Internet services not yet deployed in this market may be subject to provisions and conditions of accessibility established by Ordinance or franchise agreement;

- TCI's verification that its broadband platform can be developed in a manner that does not technically preclude future accessibility by unaffiliated third party Internet Service Providers; and

- TCI's acknowledgement that the City reserves its right to revisit broadband service provision and conditions at any time and subject to future applicable law and that same is not considered a trigger for modification of the franchise.

IV. SYSTEM CONSTRUCTION AND EXTENSION

A. NEEDS AND INTERESTS: TIME FOR COMPLETION AND UPGRADE AREAS

The City's needs and interests include provision of the necessary facilities and equipment throughout the franchise area in an enforceable, prompt and timely fashion. The City's needs and interests require TCI's facilities to be extended in a manner that ensures that cable service is available throughout the entire City, including new residential areas downtown and in-fill housing throughout the City.

The City has a very strong interest in construction standards, plant upgrades and timetables that prevent economic redlining.

Under federal law, the City must give TCI a reasonable period of time to implement the improvements specified in the RFRP and in its proposal. Also as a matter of federal law, it is the City's responsibility to establish terms and conditions for the extension of cable service.

However, because of its stated needs, the City, has an interest in ensuring that

1. construction and system modifications are completed expeditiously, so as to minimize any necessary service interruptions, as well as disruptions of economic activity and of the City's public rights-of-way.

2. All residents of the city benefit equally from deployment of new facilities and services;

The City's needs and interests require TCI's facilities to be extended in a manner that ensures that cable service is available throughout the entire City, including new residential areas downtown and new in-fill housing throughout the City.

Based on the City's experiences with TCI since 1989, it appears that the City cannot rely only on TCI's often-changing corporate plans and financial budgets to ensure that the system will be upgraded promptly and properly.

For instance, TCI's repeatedly announced (1993, 1995-6, 1998) plans for fiber deployment in and upgrades of their city system have not been actualized. Despite 1984 and 1989 requirements for status monitoring and two-way addressable plant, such have not been built. Despite temporary waiver of ubiquitous 1984 two-way plant requirements and status monitoring while TCI re-worked plans for 1993 and 1995 fiber deployment, as of October 1999, no portion of TCI's subscriber plant is capable of two-way transmission. Digital subscribers must use a telephone upstream path to render their digital converters functional, and the majority of subscribers are still served by only long runs of amplified coaxial plant, and only limited portions of the I-Net plant are two-way.

Unless the City can readily enforce timing requirements, and impose fines for failures to meet upgrade deadlines (as so many other communities have been forced to to do: Seattle and King County,Washington for example) the City may not receive the benefits of advanced technology, more program choices and broadband services for its citizens.

MODEL FOR MEETING TIMETABLE NEEDS

The City is not establishing specific requirements in this regard. However, if this Report is adopted, TCI must incorporate in any proposal its parameters for a system design and construction plan that :

• specifies all improvements, anticipated construction activities and timetables for same

• agrees that any upgrade must be completed over 100% of the franchise area within an established time frame (ideally twenty-four months) from the effective date of any renewal franchise agreements in order to prevent: discrimination to occupants of any part of the city in regards to new services; protracted disturbance of the system, the City's public rights-of-way, and traffic flow.

C. NEEDS AND INTERESTS: CONSTRUCTION PROCEDURES AND STANDARDS

The City's needs and interests include the establishment of procedures and standards that govern TCI's construction, maintenance and repair activities.

Based on the technical and operational evaluation reports prepared by KramerFirm.Inc. concerning the system, it is clear that there have been chronic construction problems during the franchise term. Many of these problems are rooted in initial design of the system, construction methods and quality of workmanship . Other problems result from poor installations which do not meet eletrical code .

In particular, the deficiencies and defects in workmanship that Kramer discovered with respect to the system include (but are not limited to):

Failure to comply with bonding and grounding requirements;

Violations of the City's Electrical Code regarding height and clearances and attachments to buildings;

Improper separation of cables between poles and from poles to buildings and on the buildings;

Broken lashing wire or messenger strand;

Damaged drops that are not repaired correctly, leaving the temporary (and often inappropriate) repair in place indefinitely

Although some of the problems plaguing the system have been corrected (either temporarily or permanently), certain deficiencies persist. The City has a

need and interest in ensuring that these deficiencies are cured and in preventing similar problems from occurring during the term of a renewal franchise. To rectify existing problems, and to avert future problems, the City has proposed construction procedures and standards that address, among other things, the deficiencies highlighted in the Kramer reports.

One method of enhancing signal quality and reliability is installing and properly maintaining high-quality, modern and durable components. Requirements for this type of equipment are discussed in a previous section of this Report. If such equipment is going to function reliably, it must be installed by properly trained workers, and maintained so that it operates within acceptable parameters. If unskilled employees or subcontractors are used to implement the system upgrade, and to perform routine maintenance, the system will never work properly. In addition, new facilities and equipment must be installed promptly so as to rectify existing and chronic system deficiencies, such as poor signal quality.

As a result of the franchise renewal needs ascertainment process, it is evident that the City has significant needs and interests in

1. improving TCI's construction, maintenance and restoration practices (and those of their subcontractors), and

2. in developing verification procedures the City can use to verify compliance with applicable standards.

MODEL FOR MEETING CONSTRUCTION STANDRDS

Accordingly, if this Report is adopted, any renewal franchise should include, among other things, the following elements:

- TCI must propose and follow a quality control plan that ensures that all construction, maintenance and restoration work complies with applicable standards and procedures;

- TCI must specify which standards it will follow and submit written materials outlining those standards;

- TCI must submit a complete system design and construction plan, as described in the spearate elements of the RFRP, with its renewal proposal.

Additional information may be required prior to the commencement of construction.

• TCI should follow the construction timetable discussed above, and file monthly and quarterly construction reports. Fines for failure to meet agreed upon deadlines should be incorporated into any franchise agreement.

• TCI must meet with City officials on a quarterly basis to discuss the progress of construction.

• TCI must ensure and provide evidence that all of its employees, contractors and subcontractors are adequately trained to perform the tasks assigned to them. Where work is not directly performed by TCI, TCI must nonetheless be fully responsible. All work must be performed in accordance with applicable requirements, including work undertaken by contractors and subcontractors.

• TCI must perform all tests necessary and must be required to demonstrate that components are operating as expected, and that each system as a whole is complying with applicable franchise requirements and standards.

• TCI must restore and replace damaged property in accordance with City standards for public property, and establish a written policy for restoration and replacement of damaged private property that meets the City's interests in protecting its citizens from economic harm.

D. NEEDS AND INTERESTS: MAINTENANCE PROCEDURES

The City's needs and interests include the proper maintenance of TCI's equipment and facilities. Without good maintenance practices, frequent outages occur and signal quality suffers.

For instance, between 1989 and 1999, a significant number of the picture quality and signal strength problems reported by subscribers seemed to be failures that can be ascribed, at least in part, to poor maintenance (e.g., problems with the headend, amplifiers, line extenders, splitters or connectors).

The Agency concluded that the fact that many of these complaints concerning picture quality problems

a) could not be repaired by the first technician on the scene, or

b) did not seem to involve the subscriber's own drop and internal house wiring system problems,

c) might indicate a lack of preventative maintenance .

Although TCI instituted a fairly aggressive and effective preventative maintenance program in 1990 (after failing a technical test of system performance), the program was discontinued in 1993 for budgetary reasons, and problems increased accordingly.

Recently, TCI personnel have been working on plant, as evidenced by frequent subscriber reports of brief outages (10 - 20 minutes) during the day in certain neighborhoods, which TCI CSR's claim is because "they're working on the plant". However, picture quality has not improved in areas subject to chronic and constant complaints from subscribers for a period of months and sometimes years, for example, the Primm Avenue neighborhood in south St. Louis.

These findings, together with the physical plant problems noted above (e.g., broken lashing wires, and improper separation of cables), clearly suggest that TCI has not demonstrated adequate technical ability to operate its system effectively. TCI's technical staff :

a) has failed to adequately maintain its system during the past eleven years.

b) has not put in place policies that require field personnel to report and fix problems as soon as they are detected

MODEL FOR MEETING MAINTENANCE NEEDS

If this Report is adopted, TCI must

- specify in detail its plans for improved maintenance, sufficient to establish and sustain compliance with applicable standards throughout the terms of any renewal franchises.

- perform maintenance activities in a manner and at a time that minimizes the frequency and impact of service interruptions.

• provide the City with written policies regarding mandated procedures for correcting problems at individual subscriber drops and referral procedures/timetables for problems that cannot be corrected by the first technician

E. NEEDS AND INTERESTS: GEOGRAPHICAL INFORMATION SYSTEM

The City's needs and interests include incorporation of information regarding TCI's facilities and equipment in the City's geographic information system ("GIS").

TCI has been delinquent or deficient in providing any kind of system maps, as required in Ordinance 59197. It has been cited for failure to meet this requirement on several years running. The deficiency is directly connected to TCI's own failure to keep maps at all.

The City is currently using and further developing a computerized GIS to facilitate storage and retrieval of various kinds of information regarding the location of property and facilities in and around the City's public rights-of-way. The Franchise Agency is responsible for tracking telecommunications users of the public-right-of-way through the franchising and licensing process. If "as-built" mapping information is complete and up-to-date, such a system will make trenching and other work in the public rights-of-way easier and safer, and provide some protection to other occupants of the streets. Thus, the City has an interest in obtaining such information about TCI equipment and facilities in a form compatible with the County's GIS, so as to minimize the delay and potential errors involved if the City had to re-convert or re-input TCI's information.

MODEL FOR MEETING GIS MAPPING NEEDS

If this Report is adopted, TCI should provide:

• as-built maps of all current and future construction as completed

• a comprehensive system map of all plant and amplifiers, indicating underground and aerial construction, on an annual basis at the beginning of each calendar year, showing changes to the system during the previous 12 months.

• other necessary information, on a periodic basis, in such form as may reasonably be requested by the City.

V. SUPPORT FOR PUBLIC, EDUCATIONAL AND GOVERNMENTAL (PEG) ACCESS USE OF THE CABLE SYSTEM

PEG requirements can take several forms.

For instance, local franchising authorities can require cable operators to designate channels for public, educational and governmental use in an RFRP.

Franchising authorities can also establish requirements for equipment and facilities (e.g., requirements for studios and cameras, as well as drops and outlets) and for institutional networks.

Franchising authorities can enforce promises for services made by a franchise applicant.

In any event, before issuing a franchise, a franchising authority can insist that the operator •provide adequate public, educational, and governmental access channel capacity, facilities or financial support.•

This section of the Staff Report will focus on the City•s specific requirements for channel capacity, operating support, facilities and equipment for PEG use, in addition to those network requirements described above, as developed in the CIty•s needs ascertainment.

A. GENERAL NEEDS FOR PEG CHANNEL CAPACITY & SUPPORT

1. Background

As Congress noted when it first passed cable legislation:

•One of the greatest challenges over the years in establishing communications policy has been assuring access to the electronic media by people other than the licensees or owners of those media. The development of cable television, with its abundance of channels, can provide . . . the meaningful access that . . . has been difficult to obtain.•

Almost all recent franchise agreements provide for access by local governments, schools, and non-profit and community groups over so-called

�PEG� (public, educational and governmental) channels. Public access channels are often the video equivalent of the speaker�s soapbox or the electronic parallel to the printed leaflet .. PEG channels also contribute to an informed citizenry by bringing activities and products of local schools into the home and by showing its viewing public local government at work.

Setting aside channels for public, educational and government use does not guarantee that the community will be able to use those channels. As the 1992 amendments to the Cable Act suggest, there also must be adequate support for access operations, in the form of facilities or other financial support. Accordingly, franchises in many communities require operators to provide facilities, equipment and services to support public, educational and governmental use. Changes in federal law since the City�s initial franchise grant, however, have altered the conditions under which access support may be required. In addition, the City�s needs and interests have developed and changed in the past fifteen years. Thus, the City has re-examined the community�s needs and interests for access support, which are summarized in this Report.

The City�s original 1984 Fanchise Agreements were designed, among other things, to respond to such needs and interests. TCI�s current franchises for Areas I and II provide for such support in a number of forms: TCI is required to carry a number of PEG access channels on the subscriber network and provide operational funding for access facilities and operations. The City�s experience over the current term of the franchises, as described in the Past Performance Review and evidenced in public testimony and surveys, underscores the usefulness of the channels and support that were furnished, contributing to both a more informed viewship and providing training and internship opportunities valuable in the current job market.

2. Future PEG Channel Capacity

a) Channel Capacity. As detailed below, the City has re-examined its needs and interests for access channels with respect to the next franchise term. The results show that 6 access channels continue to be needed to accommodate local needs and interests. This represents approximately 10% of current system analog capacity.

MODEL

Thus, if this Report is adopted, any future franchise agreements must:

• set aside the necessary aggregate number of 6 MHz channels for PEG access, as detailed below, and the City retains the right to allocate them to PEG entities as may be necessary.

b) Capacity Other Than Channel Capacity. Finally, changes on the horizon for cable system design suggest that by the end of a renewal franchise, "channels" may no longer be an appropriate measure, or the only relevant measure, for capacity to deliver programming on TCI's system. For example, if TCI were to move to a switched digital transmission system or send a separate stream of programming on demand to each home, a relatively small number of 6Mhz analog channels could suffice for delivery (just as one or two phone lines serve the average household) • but the new bottleneck created might be the system's capacity to store and retrieve programming.

As TCI expands the capabilities of its systems for commercial purposes, it must similarly expand the capabilities of the portion of each system that is dedicated for public, educational and governmental use. For example, if TCI offers video on demand for commercial purposes, it should also provide the facilities and equipment required to permit provision of PEG programming on demand. The draft RFRP does not require TCI to install a switched video system, or video on demand, nor to refrain from doing so. However, precisely because that option is left open at this stage, and TCI has not announced the exact capability of its contemplated 750 MHz plant, the City's requirements for PEG capacity must be understood to extend to forms of system capacity that may not yet exist, so that the City's PEG access arrangements are not made obsolete by system improvements TCI may decide to implement in the future.

MODEL

Thus, as a general rule, if this Report is adopted, TCI should:

• make available such novel sorts of capacity (and provide facilities and equipment for same) at least in proportions similar to that of the access channels currently in use • approximately ten percent of the total capacity of the cable system.

c) Interactive PEG. The needs and interests regarding interactive cable services discussed above with respect to TCI's commercial offerings are equally applicable to PEG.

MODEL

Thus, if this Report is adopted, TCI should:

- design its system to enable interactive use of PEG channels by subscribers, if the franchising authority and a PEG channel manager elect to offer such a service.

3. Equipment, Facilities and Support for Peg Use

a) Transmission. TCI currently provides, installs and maintains all headend equipment for amplification, conversion, receiving, transmitting, switching and headend processing of signals used for public, educational, and governmental purposes on the system, to ensure that such signals can be received by subscribers as intended - that is, without deterioration. In this regard, all of the upstream feeds must ensure that the technical characteristics of PEG channels are the same as or better than those of other channels carried on TCI's system in the City and meet FCC standards.

MODEL

If this Report is adopted, TCI should:

- continue to provide all equipment necessary for transmission and furnish character generation, and tape playing equipment that allow programming to be placed on the PEG access channels.

b) Upstream Delivery Systems. The signal reaching subscribers can be no better than the signal that reaches the headend. Thus, high-quality and reliable upstream transport is essential to providing high-quality access programming. All PEG channels currently use analog technology and equipment upstream and downstream video delivery on the Basic Service Tier.

Direct fiber-optic Public and Government Access channels- feeds to TCI's City headend, hub or node provide quality and reliability. Educational access channel feeds should similarly benefit from available technology. The cost of installing fiber optic upstream feeds should be marginal, if such feeds are constructed in conjunction with the system upgrade described in this Report.

MODEL

If this Report is adopted, TCI at its own expense should:

• continue to connect to the headend all PEG origination sites, current or future, at no cost to the City or any PEG entity

• address its willingness to replace existing educational feed coaxial pathways with dedicated (possibly bidirectional) fiber optic links to the headend. Each such upstream feed shall include the fiber itself, and all equipment necessary to permit an origination site to send signals to TCI's headend on a number of upstream channels at least equal to the number of downstream channels that may be transmitted from that site.

• transfer the upstream feed(s) to the new location (including, without limitation, moving the terminal equipment and splicing fiber, as necessary), if any access origination site is moved to another location.

c) Analog vs. Digital Transmission. Should TCI choose to change its transmission technology from a mixture of analog and digital signals to solely digital signals, governmental, public, community and educational operations could experience a severe financial impact in terms of the cost of video generation and transmission equipment. Should TCI switch from its current mixed analog/digital delivery mode to a fully digital delivery mode, the costs associated with that switch should not be absorbed by the PEG channel operators or subscribers.

MODEL

Thus, if this Report is adopted, TCI's proposal should:

• address in detail any plans it may have to make its City system fully digital during a renewal period, the effect on PEG channels of such a switch, including an estimate of associated costs, and how it plans to cover the costs for such a switch.

d) Equipment. Whenever TCI must provide facilities and equipment for PEG use, it should also provide such normal spares and backup facilities and equipment (including, but not limited to, spare fibers) to ensure that all PEG access channels can operate seven days/week, 24 hours a day.

e) Technological Improvements. As a general matter, PEG service applications should benefit from the same sorts of technological improvements the City ultimately expects TCI to bring to the rest of its cable system, as indicated above.

f) Operational & Capital Support. Under the original franchise, capital and operational support for Government Access channels and video production are funded by the 5% franchise fee being dedicated to the programming and regulatory activities of the Communications Division. Public and Community Origination Access channel facilities and operations are supported directly by TCI under the arrangements made in Subpart K and L of STL Cablevision's original proposal, incorporated into Franchise Ordinance 59197. Support of the Higher Education Channel is independently funded through the local universities involved in programming the channel. The Elementary and Secondary Access Channel operations are managed and funded by the St. Louis Board of Education, with technical and advisory assistance from both government and local origination access operations.

Existing costs associated with PEG access have been built into the rate base for the Basic Service Tier under Federal Communications Commission rules for rate regulation. In order to keep prices reasonable for subscribers, approximately same funding arrangements and levels are appropriate. Costs of public and community access operations could perhaps also be spread across a broader metropolitan-wide subscriber base as system headends are consolidated and programming delivered to a broader viewership, depending upon public access requirements in neighboring jurisdictions. It should also be noted that if TCI is subject to reductions in operating support during a renewal franchise, such cost-savings will need to be offset against any alleged increase in franchise-related costs.

MODEL

Thus, if this Report is adopted :

- TCI franchise fee payments will continue to exclusively support Goverment Access (and regulatory) operations, and its proposal must specify in detail its plan for continuing operational support (city-wide and/or metropolitan area-wide) for community and public access channels, and all proposed operating support mechanisms for both types of educational access.

- TCI must specify in its proposals both capital dollar amounts and payment schedules for purchase, maintenance and replacement of non-transmission

equipment used for community and public access video production, and may propose support for educational access, in accordance with the needs established for same incorporated in this report.

g) Changes in PEG Channel Positions. During the past franchise term, PEG entities have utilized their limited financial resources to develop unique channel identities, and to promote viewership. As a result, particular channel numbers are now associated with specific types of programming and services. Changes in channel position could confuse subscribers and decrease viewership. Consequently, to the extent that changes in channel number are made by TCI to ensure that a given access channel programmer is carried uniformly on one channel throughout the City (or the greater metropolitan area) or due to any TCI plan to achieve uniformity of channel lineups throughout the metropolitan market, TCI should compensate any access channel programmer for the costs of such change, including but not limited to, administrative costs of the change and reasonable public notice and advertising as to the change.

MODEL

Thus, if this Report is adopted, TCI should

- specify under what conditions any Operator changes in PEG channel positions would be required; and

- specify how costs for channel line-up changes will be covered, including the administrative costs of changing logos, letterheads and other materials, as well as plans for notice to subscribers regarding such changes.

h) Program Guide Listings. To promote viewership, PEG access channel holders would benefit if their program schedules were published on TCI's cable tv channel guide. The inclusion in the guide of specific timeslot and program listings for educational, public, community and governmental access would enable subscribers to quickly and conveniently locate programs that are of interest.

MODEL

Obviously, such listings require a great deal of responsibility for advance scheduling on the part of PEG entities in order to meet deleadlines for TCI's electronic entry of program titles and times.

However, if this Report is adopted, TCI should:

• propose methodologies, procedures and conditions for inclusion of more detailed PEG program titles and times on its electronic video guide.

4. Transmission Quality

a) Signal Quality. It is evident from the City's performance review that some PEG channels, especially Government Channels 16 and 63, are plagued by poor signal quality or noise injected during upstream transmission. The Public and Local Community channels have also suffered from excessively high audio levels in comparison to surrounding channels due to a lack of equipment in TCI's headend.

MODEL

Thus, if this Report is adopted, given past performance problems in this area, especially on the government access channels, TCI must:

• ensure in any renewal franchise that the transmission quality of all PEG channels from the origination point to subscribers' homes will be the same as or better than the transmission quality of other channels carried on TCI's basic service tier.

b) Maintenance and Repair Service. According to the KramerFirm.Inc report, picture quality and reliability problems suffered by PEG access channels, as well as other commercial channels, are caused in part by a lack of an effective "preventative maintenance" program for the system. While conversion to fiber optic upstream feeds, and reduction of amplifier cascades on the subscriber plant (both described in this Report) may address these problems in relation to PEG, picture quality and reliability will remain issues both before and during any upgrade of plant.

MODEL

Thus, any renewal franchise should include specific requirements ensuring that TCI:

• respond quickly and effectively to problems associated with the upstream and downstream delivery of all PEG signals. In addition, TCI must assure that all of the PEG access channels perform well, end-to-end, so that PEG signals do not deteriorate significantly in transmission.

B. PARTICULAR NEEDS FOR PUBLIC/COMMUNITY ACCESS CHANNELS

The City•s cable-related needs and interests include continuation of one (1) City-wide standard video channel each (downstream) on the subscriber network for public access use and community access programming. To make effective use of the channels and create programming , capital and operational funding is also needed.

To fulfill this access mission, since 1985, TCI has provided channel capacity, facilities and equipment, operating and capital support for these needs, in accordance with funding levels and specific documents mandated in the franchise documents and ordinance.

Both types of access programming in the City are currently managed by Double Helix Corporation, Inc. (•DHTV•), a non-profit, • 501(c)(3) organization under contact with TCI and included in the original 1984 franchise proposals of STL Cablevison, TCI predecessor. Double Helix•s mission is to promote the use of media communications (radio and video) to serve the needs of residents, civic organizations, educational institutions, and other philanthropic and nonprofit organizations in St. Louis. DHTV currently utilizes one analog video channel (Channel 22) to provide public access programming and one analog video channel (Channel 21)to provide community access programming to subscribers city-wide. The difference between the two is that under federal law, programs and content on public access cannot be editorially controlled by the cable operator or Double Helix, while on community access, editorial discretion is allowed.

DHTV provides video production training, access to video facilities and equipment to City residents who wish to make their own programs, and also provides internships and opportunities for participation to individuals and community organizations who wish to develop local programming produced under DHTV•s guidance.

The use of the Public /Community Local Origination Access facilities has generally exceeded national averages for comparable centers . Over 1600

individuals have been trained to use the access facilities. Users have logged over 39,180 hours in the control room, edit and off-line suites. That TV Studio and Video Editing usage exceeds national averages indicates both the need for and success of access programming centers. In 1998 DHTV cablecast 5,090 programmers hours on each of Channel 22 public access programming and Channel 21 local origination programming Approximately 1280 hours of January - June 999 programming consisted of first-run, original productions that were produced by staff or public access users. According to Double Helix's Report, certified users produced 156 original programs during fiscal year 1998.

DHTV training efforts, in cooperation with local unions, has resulted in a significant number of area residents learning video skills and initiating careers in television production. Summer and school year internships mandated in the original franchise have provided further opportunities. This TCI/DHTV partnership has played an important role in St. Louis' extensive television industry and workforce and served as an incubator for many producers wishing to gain skills necessary for union participation.

DHTV also works with the Missouri Division of Employment Security to list job openings available to City residents.

DHTV also operates a community bulletin board on Channels 21 and 22. This service allows non-profit organizations to inform subscribers about upcoming events and available services. In fiscal year 1998, the community bulletin board displayed thousands announcements from hundreds of organizations. Many of those would never have received coverage from commercial local broadcasters.

DHTV has participated in region-wide full election coverage in cooperation with similar community access operations in St. Louis County, instituted by Continental Cable and now operated by TCI. These events have been successful and popular, although limited by a lack of two-way interconnection for feeds to the County facility as well as from the County facility.

During the term of the current franchise, DHTV has expended significant resources to develop an identity for Channels 21 and 22 To maintain this identity, and to avoid subscriber confusion, DHTV, like other governmental and educational broadcasters, wishes to ensure that its programming will remain on the same channels during the term of any renewal franchise.

The history of PEG use suggests that the use of PEG facilities develops better when such facilities are not operated by the cable operator itself. Thus, the

public access needs and interests of the community will be best met by continuation of independent control of such channels, subject to franchise approval of the operational plan in regards to community needs.

Support for equipment and facilities is necessary if the community is to make effective use of its PEG access channels. Equipment must be purchased, maintained repiared and replaced over time; facilities must be upgraded and modified to satisfy changing needs; office equipment and related support structures (computer systems and software, disks, tables, and so forth) must be obtained and replaced. These costs are distinct from plant and network costs, such as the costs associated with switching signals at the headend. Without continuation of significant and adequate support for operations and equipment maintenance, Public and Community Access would not continue to thrive.

Citizen testimony and completed surveys at the City's public input hearing of February 1999 indicated a preference for continuation of community and public access programming and the training opportunities associated therewith. The Agency survey revealed that 34% of respondents watch the channels and 59% indicated that it was "somewhat", "very" , or "extremely" important.

MODEL FOR MEETING PUBLIC / COMMUNITY ACCESS NEEDS

If this Report is adopted, The City will evaluate its community needs against TCI's proposal which must describe in detail its plans to :

- dedicate at least two 6 MHz channels on its subscriber network - one each for public and community access use, based on the needs and interests described above.

- continue to contract with an independent access corporation for management and staffing of the access channels and facilities.

- not exercise editorial control over the public access channel, or any other spectrum allocated for PEG purposes, except as provided by applicable law in order to promote Congress's goal of fostering open public discourse.

- provide a quality upstream feed from the community/public access studio(s) to the TCI headend or hub insertion point, capable of sending, processing and redistributing signals that meet FCC technical standards

- specify the level and amount of capital support for equipment purchases, maintenance and repairs and replacement to meet the needs described herein

• propose annual financial operating support to continue in a renewal period, including method and funding levels necessary to support facilities, maintenanceand staff.

• ensure that DHTV or any successor does not lose the channel identities it has developed, preferably by TCI maintaining current channel positions.

• agree to absorb any costs resulting from changes in upstream or downstream delivery , including but not limited to technology conversions from analog to digital delivery of public and community programming, or changes in channel position and associated administrative costs, or relocation of TCI-funded access studios.

• provide a method of interconnecting access facilities thoughout the City and County for two-way transmission of live programming such as election coverage or other events.

• describe in detail plans for interactive PEG capacity or other on-demand delivery, to the extent that such services are available on the system's commercial channels.

C. PARTICULAR NEEDS AND INTERESTS: EDUCATIONAL ACCESS CHANNELS

The City's cable-related needs and interests include continuation of the two (2) City-wide standard video channels (downstream) on the subscriber network for educational access use. One is college and university oriented, and one is focused on the elementary and secondary school sector. Federal law specifies that such channels (like government and public access channels) must be carried on the lowest tier available (i.e. the Basic Service Tier).

1. Higher Education Channel (HEC)

There are several institutions of higher education located in the metropolitan area which have coordinated with each other to fund and provide content for an existing Higher Education Channel, which benefits students wishing to pursue educational opportunities through tele-courses "for credit" as well as more general programming of interest to non-student viewers. Distance learning and outreach programs (e.g., explaining educational opportunities available at the schools) broaden the options available to City residents.

The channel is provided in the City through the use of a multi-cable system interconnection from its orgination point in St. Louis County, as required in Ordinance 59197. It would be desirable for this two-way interconnection to be upgraded from coaxial to fiber optic feed lines for the purpose of improved signal quality and reliability.

It would be preferable for the HEC to appear on the same numbered channel throughout the metropolitan area, in order to foster its identity and recognition factor.

2. Elementary & Secondary Education Channel (K-12)

The City of St. Louis Board of Education is currently using the 1984 franchise mandated Elementary & Secondary Education Channel ("K-12"). Programming was initiated in early 1999; during this first year of its operation much of the content is still character-generated announcements. However, delivery of more expansive programming is planned and production underway. Occasionally, this K-12 channel runs staff development programming, parent information programs, and public service programming.

The Board of Education wishes to retain control and operation of this K-12 educational access channel, although the possibility should be left open that other educational authorities (for example the Archdiocesan school system or the Lutheran School system) may also disseminate programming on the channel in the future.

The current analog feed from the Board of Education K-12 studio to the TCI headend runs from Beaumont High School to the TCI's Delmar and Euclid facility.

Board of Education staff have also expressed interest in being able to generate programming from more than one studio, which would involve interconnection of those satellite facilities to the main studio. Such interconnection could also meet a community need by being extended to non-Board studios, which would facilitate participation by other K-12 educational entities in programming the channel.

MODEL FOR MEETING THE EDUCATIONAL ACCESS NEEDS

If this Report is adopted, TCI should provide and address in its proposal:

- 6 MHz channel capacity for the Higher Education Channel on the Basic Service Tier;

- 6 MHz channel capacity for the Elementary & Secondary Access channel;

- ensure that the HEC and K-12 Channel (or any successor thereto) do not lose the channel identities they have developed, preferably by TCI maintaining consistent channel positions;

- how TCI will absorb of any costs resulting from changes in upstream or downstream delivery including but not limited to conversions from analog to digital delivery of public and community programming, or changes in channel position and associated administative costs;

- provision of a quality upstream feed from the educational studio(s) to the TCI headend or node insertion point, capable of sending, processing and redistributing signals that meet FCC technical standards;

- possibilities of TCI participating in linking future Board of Education or other K-12 satellite studios to the main studio and upstream transmission feed;

- availability and use of additional educational access channels as system's channel capacity is expanded following upgrade of system; and

- any future plans for interactive PEG capacity or other on-demand delivery, to the extent that such services are available on the system's commercial channels.

D. NEEDS AND INTERESTS: CITY GOVERNMENTAL ACCESS CHANNELS

The City's cable-related needs and interests include two standard video channels (downstream) on the subscriber network for governmental access use, in addition to any requirements for non-video digital (data) channels.

In 1991, the Communications Division of the City initiated production and cablecasting of governmental access programming for both the general subscriber public (City Channel 16) and internal training and information programs for City agencies and departments on scrambled City Channel 63.

Channel 16 is used to provide tape-delayed coverage of Board of Aldermen meetings, press conferences and a variety of City-sponsored events and features. In fiscal year 1999, Channel 16 carried approximately 3000 hours of programming (or about 60 hours of programming per week). Approximately 10% of that programming consisted of first-run, original productions.

In addition to producing and cablecasting video programming for City government, the Division operates a text-based bulletin board on Channel 16. The bulletin board is available to all City agencies and quasi-government agencies to deliver information to the public. At the present time, the bulletin board runs at full capacity (i.e., delivering 60 -65 pages of announcements daily).

The Communications Division primarily utilizes Channel 63 to provide focused interest programming requested by the Fire and Personnel Departments to reach city employees during the work day.The channel is scrambled and only receivable in City buildings through the use of programmed addressable converters.

Channels 16 and 63 are recognized as official outlets for City government information. The Division has expended considerable resources in developing the "Channel 16" brand identity and should retain their existing channel assignments during the term of any renewal franchise.

MODEL FOR MEETING GOVERNMENT ACCESS NEEDS

If this Report is adopted, TCI should:

- continue to provide 2 6Mhz analog cable channels, one on the Basic Service Tier for "Government Access" programming and one scrambled channel for internal "Municipal Video Services" programming;

- guarantee government access channel assignments will remain on 16 and 63;

- continue to provide - but correct and properly maintain - a quality upstream feed from City Hall and Fire Department headquarters to the goverment access studio to facilitate delivery of live programming from those locations to cable tv subscribers with a picture quality that meets FCC standards;

- continue to provide a quality upstream feed from the government access studio(s) to the TCI headend or node insertion point, capable of sending, processing and redistributing signals that meet FCC technical standards; and

• agree to absorb any costs resulting from changes in upstream or downstream delivery , including but not limited to technology conversions from analog to digital delivery of public and community programming, or unavoidable changes in channel position and associated administrative costs.

E. NEEDS AND INTERESTS: PEG CAPITAL GRANTS

1. Educational Access Facilities Grants

The City's needs and interests include capital grants for educational access as specified below. The school system's educational access channel plans to cablecast Board of Education meetings, school system information and student -produced programming, among other things. During the next franchise term, the SLBE (St. Louis Board of Education and it staff) intends to expand the educational access services it provides to students and parents. In particular, the school system would like to cablecast parental and public information services, and after-school instructional programming for students and families.

In order to foster these types of programs, as well as showcase student events and video productions, the SLBE has expressed to the Agency its interest in linking 3 ancillary video facilities with its main video studio. Equally important the SLBE has begun an initiative with a special education program for high-technology job training, such as computer animation. The cable system could play a unique role in fostering these educational opportunities as well as broader participation in K-12 Educational Access programming.

To continue and expand in its providing quality educational access services and to begin providing new types of services, the channel 's programming would benefit from new sites being linked to its existing origination studio. Private school systems may develop K-12 programming, which would also need an upstream origination link .

If this Report is adopted, based on the needs and interests identified by the Board of Education and acknowledged by the City, TCI's proposal may address and describe:

• any voluntary proposal to assist K-12 schools in linking multiple sites to the current upstream feed for the K-12 access channel, including a technical description of any proposed links and necessary transmission equipment, as well as timetables for activating same;

- any in-kind capital contribution TCI proposes to make to foster educational access, including provision of facilities and equipment described above; and

- whether it would attempt to pass through any of these voluntary expenditures to subscribers.

2. Public and Community Access Facilities Grants

The City's cable-related needs and interests include capital grants for equipment to DHTV (or such other public access corporation as may be designated for operation of public and community access operations and channels.

As noted above, DHTV is a 501(c)(3) organization that TCI has contracted to provide public and community access services city-wide. To support the development of community programming, DHTV provides video production training classes to City residents, and makes its studio facilities and production equipment available to public access users and community access volunteers and interns.

In 1998, DHTV's overall budget was approximately $321,000. Of this amount, $257,700 was received from TCI in the form of an annual operating grant. According to DHTV, these limited revenues are primarily allocated between operating expenses (17% e.g., office overhead, upgrades, maintenance, insurance and replacement components) and salaries (77%) leaving only $14,000 (4%) allocated to capital purchases. DHTV does not have the financial means to replace outdated or unrepairable equipment. This is reflected by the fact that the majority of DHTV's equipment inventory is now over fifteen years old. DHTV has lease-purchased limited amounts of video production equipment from operating grant or other revenues. Neither TCI nor its predecessor has made any significant capital investment in equipment since its original 1985 capital grant (about $365,000), although Double Helix itself has purchased over $109,000 in access center equipment.

The continued viability of these community and public access operations requires continued equipment provision and support during the term of any renewal franchise. The facilities and equipment provided over fifteen years ago have long passed the end of their useful lives. Accordingly, much of the facilities and equipment derived from the current franchises must be replaced, overhauled or upgraded. Further, the continuing progress in video technology over the coming years, as well as continuing wear and tear on equipment, will

require ongoing repair and replacement over the next franchise term. This will be particularly true as the television industry makes the transition to digital transmission, as required by federal law. The City's needs and interests in access programming thus require capital support from TCI, in addition to the specific facilities and equipment identified in other sections of this Report.

DHTV conducted a thorough inventory of all available equipment, and has concluded that over the next franchise term $495,000 is needed to replace aging equipment that maintains operations / usage levels or fills in major gaps such as an essential lighting grid. This funding is necessary to meet the City's needs and interests in promoting video production training, skilled workforce development and public and governmental access programming. The necessary grants should be provided at staggered intervals during a renewal franchise, so that DHTV can continuously repair, upgrade, and replace its production and editing equipment, as necessary.

In addition, the experience of the City and other PEG channel users over the past franchise term has shown that the facilities and equipment needed to make effective use of PEG channels require continuing maintenance and repair to remain usable and in good condition.

MODEL FOR MEETING THE NEED

Thus, if this Report is adopted, TCI's proposal should address the needs to :

- provide capital support grants to DHTV for replace video and other equipment in the approximate amounts of $205,000 in year 1; $96,000 in year 2; $194,000 in year 3, so that the public and community access facility can be outfitted with newly purchased and upgraded equipment in accordance with DHTV equipment inventory and purchase list attached to this report;

- ensure the availability of TCI reserve maintenance and repair funds to fix or replace such facilities and equipment as necessary during the term of a renewal franchise, or provide access operator with the funds needed to do so, in addtion to general operating support of public and community access staff and operations;

- continue to provide the company-owned public access studio (or appropriate sucessor studio) currently available to residents of the City.This studio is necessary to meet at a minimum current and future demands for public access production time; and

• acknowledge that capital grants and operating support for public and community access offered by the company in consideration of franchise renewal are in addition to payment of the full 5% franchise fee.

E. INSTITUTIONAL NEEDS FOR RECEPTION OF PEG PROGRAMMING

1. Installation of Cable Drops and Outlets.

The City's needs and interests in regard to PEG programming include cable drops and outlets at public access, educational, and governmental sites. Such offices and facilities require access to the subscriber network to receive governmental and educational programing, so that (for example) fire department personnel can receive training programs, students of all ages can take advantage of educational programming, school buildings can receive news and learning channels associated with the industry's "Cable in the Classroom" initiative, and government employees can receive scrambled informational programming at their place of work.

Thus, TCI is currently required to install and provide without charge,throughout Areas I and II, one service outlet to each fire station, public or non-profit school building, police station, public library, government facilities and other buildings used for municipal purposes as may be designated by the City. Over the term of the franchise, public, educational, and governmental institutions in the City have benefitted from the provision of these facilities.

At times throughout the past franchise term, various agencies and institutions have requested additional drops at their facilities. For example, many individual offices in City Hall need one or more drops to serve their departmental needs for access to essential programming. Schools often find that one drop alone will not suffice for adequate video signal to multiple classrooms in the building. The Fire Department has numerous training rooms in its headquarters, all of which require outlets to access the Municipal Training Channel's programing.

Accordingly, governmental and educational institutions as well as all PEG access facilities generally continue to need the following, free of charge: installation of at least one subscriber network drop and outlet at a minimum, or more as specified in the RFRP; and non-premium cable service on each outlet. Since the scrambled Municipal Training Channel service cannot be received without an addressable converter box, TCI should also furnish each of the government facility outlets with all terminal equipment necessary to receive

service at each outlet. Continuing current practice, TCI should charge only its direct cost of installing additional subscriber network drops and service outlets requested by the City during the renewal term. Additional terminal equipment for such subscriber network outlets shall be provided by TCI free of charge.

2. Adequate Signal Strength to Institutional Drops and Outlets .

In order to be useful, essential PEG programming must have adequate picture quality at institutional reception points. Picture quality and signal strength tend to degrade if signal level entering the building is not adequate to support multiple outlets.

MODEL FOR INSTITUTIONAL CABLE OUTLETS

If this Report is adopted, based on the needs and interests identified by the City, TCI must:

- maintain all existing drops and outlets, and provide new cable drops and outlets as specified in the RFRP. Moreover, TCI must provide the following, free of charge, to all qualified agencies and entities upon request of the Franchise Agency: (i) basic service; and (ii) all terminal equipment necessary to receive basic service; and

- provide signal strength of at least +15 dBmV at 750 MHz in order to allow the City to extend service throughout a designated site and ensure that any signal provided to a designated site enjoys a carrier-to-noise ratio of 43 dB, unless the FCC adopts a different standard.

VI SUPPORT FOR A MUNICIPAL INSTITUTIONAL NETWORK OVER THE CABLE SYSTEM

A. BACKGROUND

Enhanced communication among City departments, agencies and related tax-funded institutions such as libraries, government offices, and other public buildings offers numerous ways to benefit City residents through improved delivery of services, greater access to governmental processes, and efficient, low-cost operations. Thus, in addition to PEG channels, facilities and equipment, under federal law, a franchising authority may require as part of a cable operator's proposal that channel capacity on institutional networks, or "I-Nets," be designated for educational or governmental use. Such I-Nets connect institutions and facilities serving the public. They may carry not only video, but also voice and data transmissions.

The original franchise required provision of 5 channels available to the City for video or data use. The 1989 transfer requirements were more specific in establishing that TCI provide 6 digital carriers dedicated to two-way communications; three (3) forward and three (3) reverse carriers which the City could use for its nascent computer network. These carrier channels were in addition to the two video channels for Government Information (16) and Municipal Services/Training (63).

During the mid-90's these data channels were activated in cooperation with the City's Information Services Department, using limited two-way cable plant to link a limited number of selected city offices, such as the Health Department, Juvenile Division, and Street Department with the City Hall Main Campus computers.

B. PROBLEMS AND LIMITATIONS OF THE CURRENT I-NET

The original franchises required that the cable systems built be "capable of two-way operation". However, as noted above, currently the system has only short runs of two-way amplifiers to serve City government's data-carrier connectivity needs.

Unfortunately, the reliability of the computer network run over this coaxial/reverse amplifier cable system platform has proven problematic. Some problems are clearly attributable to sub-par performance and maintenenance of the cable plant and headend electronics. Some may be attributable to problems associated with City-purchased electronics for the computer network itself. However, the strong benefits of datalinks between all City departments and agencies was clearly established despite such problems.

In the interim, a combination of monthly fee ISDN and T-1 lines, Information Services Deparment wiring runs and dial up telephone lines have provided a minimal low-tech interconnectivity.

As discussed herein, two-way capacity over the cable system (collectively, the "I-Net") has not been effectively provided and maintained to all of the sites specified during the first franchise period. Additional sites have never been connected due to the absence of two-way plant. As a result, many City agencies are unable to benefit from the capabilities that would be afforded by the network if it were fully operational. Because of the current I-Net's unreliability and chronic problems, several City agencies have been forced to purchase or lease necessary communications circuits from other companies, in order to run the applications they need. It is therefore important in the next

franchise to establish absolute operating parameters, rather than merely indicate channel capacity which assumes the channels will work.

The original two-way data-channel I-Net design is now over fifteen years old. For the next franchise term, a coaxial cable network of the sort originally contemplated would be technically primitive and inadequate. Even if two-way channel capacity had been built and functioned as promised, it would now need to be revisited and upgraded.

In its current state, the existing I-Net cannot meet the City's current cable-related needs and interests, let alone future needs and interests. The City's research shows that there is great interest in additional I-Net applications. As detailed below, a fully-developed broadband I-Net can provide numerous benefits to the community.

C. THE IMPORTANCE OF I-NET TO THE CITY IN THE FUTURE

The Franchise Agency, the Board of Public Service, the Community (now City) Development Agency and the Information Services Department have recognized an urgent need for City government to become even comprehensively electronically wired and accessible. As transactions become more and more electronically based and delivered, it is critical that electronic infrastructure is available to the City and the City maximize its efforts to satisfy the needs of its citizens in fostering new ways of "accessing City Hall".

1. Research of City Needs

a) Public Forum Input Results from 5 public hearings (conducted in February-March 1997 and February 1999) and citizen surveys associated with those events and feedback from public officials indicated strong interest for this concept .Both City representatives and members of the public felt it was very important and very useful for the City to improve internal and external access to City databases, information and processes.

b) City Network Study & Report Further, in 1996-97, the City created a Joint Committee and funded a study of the City's computer network needs. The "Communications Infrastructure Plan Development Oversight Board" (COB) was composed of representatives from the Board of Aldermen, the Communications Division, the Board of Public Service, Information Services, and the Comptroller Office.

The detailed report prepared by Worldwide Technology Inc (WWT) analyzed a number of approaches and options and outlined recommendations based on both

(1) preliminary analysis of operating department communication needs and expenditures, external focus groups, and availability of communications options existing within the city and

(2) current technology and cost estimates for Phase I deployment to a limited number of city buildings near City Hall.

c) Telephone Survey Results The Agency engaged Telephone Contact Inc to conduct a survey of residents and subscribers during September 1999. A detailed set of questions matched some of those distributed at public meetings and fora covering this issues. While only 23% expressed comfort in using computers to pay City bills or conduct actual transactions , a larger percentage were interested in accessing information such as meeting agendas, deeds, or property tax assessments. 33% of residents expressed support for such accessibility of City documents.

d) Information Services Department Needs The IS Department has been assigned the task of creating connectivity to individual departments and buildings, with a special emphasis on finding ways to reach far-flung government sites throughout the City, such as fire and police stations, as well as regular office and operations buildings. The City expends over $200,000 a year in maintaining such connectivity, and could achieve substantial cost savings if the I-Net generally followed the subscriber network into residential neighborhoods where these government facilities are located.

Without such connectivity, the data bases and relational mapping will not be accessible to those who most need it.

2. Research on Current Uses and Needs of the Computer Networks & Internal Communications

In addition to the assessment of future computer needs, the Agency has researched uses, limitations and possibilities associated with the current computer network.

a) St. Louis Community (City) Development Agency Initiatives The City's Community Development Agency has embarked on two major projects involving computer access. One project worked with City departments and local neighborhood organizations to create a comprehensive set of Web pages outlining the functions and services of the operating departments and agencies, and the attributes, features, activities and highlights of the City's rebounding neighborhoods. Another project involves the use of computers placed in key locations (such as neighborhood community centers) throughout established "empowerment zones" where demographics and economic development concerns have made clear that massive intervention is warranted to facilitate access to job and other information for the poorer sections of the community.

b) Use of City employees at "off-site" locations "Neighborhood Stablization Officers" employed by the City have also been located in these same community centers, so that they can serve as facilitators with residents and businesses who need City Hall services and information, problem solving or intervention. Although equipped with laptop computers, lack of connectivity to critical databases and computers at the City Hall campus - or even timely e-mail communication with appropriate city employees or departments - has proven very limiting to their work. These community centers, job information sites, police sub-stations, and detached city offices are located in neighborhoods throughout the City already served by TCI's cable system.

c) Computer Users Study Group The interest shown by representatives from many departments and agencies that partiipate in monthly meetings of the computer group, and the on-going work in establishing multiple levels of the database (Assessor records, GIS mapping of underground infrastructure, census and housing data, parcel and building footprints, etc.) make clear that inter-connectivity continues to be an important focus of streamlining and increasing the efficiency of City government.

d) Board of Aldermen At present, members of the Board report that they are not on-line to receive e-mail electronically, making it difficult to timely receive and respond to citizen or departmental correspondence. Equally problematic is their inability to research city-generated information or databases citicial to their daily work.

e) Communications Division The Franchise Agency is currently paying for an ISDN line to connect its computers with those on the City Hall campus network. In light of the current requirement for two-way interconnection of City Hall and Fire Department Headquarters with the Franchise Agency for

video purposes, and the previously stated need to improve the quality of that interconnetion in the next franchise period, it makes sense that the required data carrier channels should also be improved and rendered functional. The Division also plans installation of a satellite dish at its Oakland location to intitate reception of satellite delivered programing and training material pertinent to either subscribers or City employees in order to enhance the usefulness of Government Channels 16 and 63. To the extent that some of this training may be interactive, a two-way Institutional Network could facilitate opportunities for city employees at various locations to receive this training at their worksites, such as Fire Stations, etc..

f) Police Department Fiber optic backup to an existing microwave link would ensure realiability of the radio system, giving reducndancy to the capability to update the system's alternate site. This would require connectivity between Police Headquarters at the intersection of 12th and Clark streets and the backup site at Arsenal and Sublette. Both locations are on the current subscriber network plant

g) Fire Department & Emergency Services The City and its agencies have developed a multi-layer relational database which should be accessible to emergency personnel at all times through the network. For example, there is immense public safety value in the City's ability to combine and access the SLDC map of every city parcel and 'footprints' of the buildings on them with the Assessor's database of a building's specific data(i.e. number of bedrooms and baths, type of use, etc) and with occupancy permits issued by the Building Division. A Fire Unit or Ambulance responding to an alarm could instantly access critical information about the location of the alarm before leaving the firehouse. Knowing contents, hazardous materials that may be on site, number of bedrooms, occupancy maximum, character of adjacent buildings (high or low density), nearby water mains and lines, the Department could even more quickly prepare backup or other emergency measures and approaches to the situation at hand.

h) Public Utilities Through necessity, the Water Division has embarked on an ambitious plan to create its own network for control of water pressure and delivery throughout the City. This development has been fostered by use of City-owned communications conduit in limited locations. Use of the cable plant could allow the Division to expand both delivery, telemetry and control options, as well as make available to other City Departments and crews (such as Street and the Board of Public Service) valuable information about the city-owned underground pipe system. Avaliability in computerized database or GIS

mapping applications would allow better coordination between the construction, repair and improvement projects of all the involved departments and assist in preventing unexpected consequences to city infrastructure of all sorts.

i) Health and Hospitals The Department has been frustrated by the poor performance of the cable system I-Net on which it currently relies to exchange communications and data. The Department has complained to the Agency that , although it has maintained its connectivity through the cable system, chronic interruptions create problems and hamper their ability to do daily update on their werbsite. The Internet plays an important role in the Department's research for health information, as well as regular information obtained from federal Centers for Disease Control or state agencies. Therefore reliable data transmission between the City's Internet portal and this operating department is especially urgent.

j) Juvenile Division The Department was one of the orginal sites connected by two-way amplifiers with the City Hall Main Campus computers. Critical data relating to the Juvenile Court's activities was transferred over the network from the Vandeventer location. Due to problems and lack of reliability, the Division was forced to seek other solutions to its ciritical communications needs.

k) City Court System Trials conducted by TCI between the Medium Security Institution on Hall Street and the courts demonstrated that existing cable plant and the length of the run was not capable of suporting two-way video of a quality to meet standards for video arraignment. It becomes more viable, logical and critical to revisit this issue due to short distances between courts and prisoner facilities with a new jail is constructed downtown, and the potential ability of upgraded cable plant to support video arraignment over longer distances. Linkage of databases and secure transmission of records between court and detainment facilities and firewalls over the existing network is another need to be better addressed.

D. INSTITUTIONAL NETWORK NEEDS FOR THE FUTURE

The following lists assume TCI ability to at least provision reliable and functional two-way communications over an institutional network backbone of no less than the three forward and three reverse digital data carrier channels and associated generation equipment currently required in the franchise.

However, as shown herein, the current limited two-way capacity is not capable of satisfying either current or future needs and interests identified by the City. The current I-Net lacks the reliability and technical capacity that are necessary to support mission-critical applications, let alone transfer of data or connection to the City's Internet portal.

Based on past uses, current applications and limitations, and future needs, it is clear that the City can benefit its own operations and its taxpaying residents generally by obtaining I-Net facilities and equipment as part of the reasonable compensation the City receives from TCI for the company's use of the City's public rights-of-way. I-Net capabilities reduce the City's communications costs .

Thus, in-kind compensation in the form of an I-Net provides significant benefits to all City residents, whose rights-of-way are used by TCI in conducting its commercial business.

The model set forth herein connects these sites with a single-mode fiber-optic backbone and associated equipment. Such a network must be operational and reliable on a 24 hour seven day a week basis.

1. Institutional Network Connection Sites

Inter-connection between government buildings for data exchange and internal communications is of primary importance to the City. Further, the City's departments cannot readily access each other's websites and departmental databases without computer interconnectivity. Nor can the City expand it's goal of making local government activities, information and transactions evermore accessible to its constituents, residents and businesses without development of a comprehensive network.

The City's needs and interests include interconnection of all its facilities for data and video exchange.

The following list assumes that City will prepare each of the sites listed to meet the physical plant needs of such network connections (e.g. adequate electricity, reasonably accessible wiring routes, secured space for termination equipment, etc.)

All government buildings and sites should be attached to the two-way network generally and more particularly interconnected for selected sites as specified below.

1. All Police and Fire Stations with each other, Fire Department Headquarters, Police Headquarters, City Emergency Management Agency, Communications Division and City Hall for exchange of emergency data.

2. All City facilities with each other, Juvenile Court, Civil Courts Building, Municipal Courts Building, City Hall and inmate institutions to facilitate the ability to keep and exchange centralized records, video arraignment proceedings, and other court-related documents.

3. Street Department and Facilities Management on Hampton

4. Water Division locations at McRee, Chain of Rocks, Kingshighway and Compton Heights.

5. Communications Division with City Hall and Fire Headquarters in conjunction with use of two-way video channels for origination of live programming at City Hall.

6. Community Centers designated by the City as locations for Neighborhood Stabilization Officers and Empowerment Zone or Community Information Network activities.

7. Parks Department facilities

8. Health Department headquarters, clinics and off-site facilities

9. Community Development Agency and St. Louis Development Corporation(Internet Portal)

10. Main Library

11. Other City facilities not located on/near the City Hall Campus as specified.

2. Needs and Interests: Applications Supported by the I-Net

The City's cable-related needs and interests include an I-Net capable of supporting the applications listed below and of expanding its capabilities to support future applications.

City Departments (and the Information Services Department which supports them) have indicated that they require an institutional network connecting all

municipal buildings and sites. The following list, illustrates the range of capabilities in which the City Departments are interested in sharing:

Database sharing (such as tax and zoning records)

Two-way video origination for command and control of emergency situations from selected sites such as City Hall, Communications, Police and Fire Headquarters

Video surveillance of facilities (similar to a webcam for security purposes)

Data transmission

On-lineelectronic transfer and exchange of of records, photographs, and documents such as incident reports, vouchers, payroll and status forms, and the like

Geographic information systems (GIS) mapping and sharing

Live video programming from selected sites to I-Net desktop computers, to the City's websites, and to the subscriber network

Distance learning from origination sites outside the City

Internet access for information sharing, research and consultations

Public information kiosks for access to community information

Interconnection with other local and state government I-Nets or databases

Two-way video arraignment and interactive video bail bond hearings

Interconnection of City dispatch facilities for police, fire and ambulances

Interconnection with state agencies communications systems for the transfer of data

Interconnection with local state traffic monitoring positions at major intersections around the City and along the highltways

Citizen access to selected non-fee government records, data and meetings

Two-way video-conferencing for training and meetings

Water pressure and flow control and security surveillance

Using the I-Net for the foregoing applications would be faster, less costly, and more secure than using dial-up lines by modem (particularly in view of the file sizes involved) or individual department purchase of communications services.. These applications benefit the community by increasing the efficiency and decreasing the cost of local government operations.

E. MODEL FOR MEETING THE INSTITUTIONAL NETWORK NEEDS

The model I-Net proposed below possesses the characteristics, design, and functionality that are needed to meet the demands of the City.

If TCI proposes a different way of meeting the City's I-Net needs and interests, then, as with the subscriber network, TCI must show that its proposed system would meet those needs and interests at least as well as would the model.

1. Characteristics

If this Report is adopted, based on the needs and interests identified by the City, any TCI proposal for an Institutional Network should address these needs in detail:

- provide an integrated I-Net that allows the City to run the applications listed above, as well as other similar applications that may be developed over the course of the franchise term.

- link all specified existing City sites to the network, and be capable of adding new sites as additional City facilities may be developed during the course of the next franchise term. The City must be able to extend the I-Net to additional sites to allow for growth and expansion.

- meet the conditions specified herein with respect to safety, burden on the public rights-of-way, flexibility, aesthetic issues, availability of end-user equipment, capacity, interactivity, and suitability for the City's projected growth needs.

- ensure that I-Net physical plant complies with the National Electrical Code (NEC), the National Electrical Safety Code (NESC), all applicable State and municipal codes, and industry standards regarding communications installation, to protect public health and safety.

- delineate and explain in detail the technical specifications and equipment components of an I-Net in light of the Worldwide Technology recommendation and /or good engineering practice

- address how the proposed I-Net will meet the community needs herein, an show that all the requirements specified in the RFRP are met;

- describe and evaluate in detail the costs associated with the proposed I-Net;

- if - based on the costs of an I-Net on the model outlined in this Report -TCI claims the cost is excessive, explain in detail and to the satisfaction of the City why the cost of constructing a fully fiber optic, ubiquitous I-Net would be excessive.

- ensure reliability and signal quality on a 24 hour, 7 day a week basis, including written proposals for procedures, plans and staffing to ensure preventative maintenance and emergency response to problems with the network on a 24 hour, 7 day a week basis.

2. Design & Functionality

As indicated above, the City has determined a need for an I-Net that links all City agencies, municipal buildings, fire, police, ambulance, emergency management and and health facilities and interconnects with certain other local government or state facilities and databases as needed.

While deployment of a distinct and separate municipal network can be incorporated into the construction of TCI's plant during its announced upgrade to 750MHz and 2-way capacity, it is possible that the cost of meeting all the City's cable-related needs and interests could exceed the capacity of the cable system to pay reasonable compensation to the City while earning a reasonable return on plant investment.

Consequently, the City, has developed a core model that would not require a separate and distinct ubiquitous fiber optic I-Net. Rather, the model I-Net is co-located and simultaneously contructed with the subscriber network or any upgrades thereof.

This model I-Net, as set forth in the RFRP, could satisfy many of the City's needs and interests.

• Constructed with single-mode fiber, using a multi-ring configuration which provides redundant routing to priority I-Net sites designated by the City. Every I-Net location shall have at least 24 fibers (12 in / 12 out) dedicated for the sole use of the I-Net.

• Has links to each I-Net facility that: (i) contain at least 24 fibers; (ii) is capable of bidirectional operation; and (iii) is provided at no charge to the City and I-Net user entities. At a minimum, the City I-Net must be designed so that all I-Net sites can reliably originate and receive video and data signals, as desired. Each link of the I-Net shall be designed with a minimum capacity of 155 Mbps over each fiber, and shall be scalable in order to be able to provide faster transmission speeds in the future, and shall initially be activated to provide 10Mb/s ethernet service to every I-Net location.

• Is designed so that the City Communications Division Facility (•CCDF•) can serve as a common data and video monitoring, network control point for the I-Net. Each I-Net site may be connected to the CCDF either through a direct fiber optic •home run• or by way of the backbone ring. The design must enable video and data signals to flow seamlessly between all facilities on the interconnected networks.

• Shall enable video programming originated at selected I-Net sites to be routed onto channels on the subscriber network dedicated for government access use, or video from I-Net sites to be routed to another I-Net site for dissemination to end-uer desk-top computers.

• Should be able to send or receive fully interactive video and data signals to or from other surrounding jurisdictions that are interconnected to the I-Net, assuming agreement of parties.

• Uses existing fiber wherever possible, to minimize construction costs, and is co-located with subscriber network fiber to the greatest extent possible.

• Terminates at each I-Net site on termination equipment provided, installed by TCI at the interior location specified by the City which serves as the dataportat each I-Net site for (i) Institutional Network connections and (ii) LAN communications hub for that building or facility.

• Specifies general physical space needs, characteristics and requirements necessary to activate I-Net user sites with TCI equipment and wiring, so that the City may proceed with physical preparation or rehab of I-Net user sites listed below.

• To the extent that any I-Net equipment must be located therein, provides space, cooling and security at its subscriber network city headend or hub(s)with backup power supply to ensure uninterrupted network operation during local power outages and allows designated City personnel to have 24-hour access, seven days a week, to I-Net equipment located in the headend or hub, accompanied by a designated and trained TCI representative.

• Any I-Net link to the TCI headend should be routed through the CCDF for network control and security firewalls to ensure that City information does not route to TCI or its subscriber network.

• The City must be able to restrict access to I-Net equipment and fiber optic terminations to specifically authorized personnel. This a pplies to any I-Net equipment location not under direct City control.

• Must be reliable to a level comparable with that of a telephone system, that is, 99.99 percent or better (i.e. less than 52.5 minutes of outage annually other than planned and approved maintenance) because the I-Net will be used for critical data and video transmissions. With respect to data transmission, the I-Net must be designed and operated to maintain a bit error rate of 1 x 10-8 or better. TCI shall provide the City with documentation of testing demonstrating that all I-Net components comply with these standards. The City may require spot testing of plant to verify compliance and participate in and observe testing.

• Furnishes all terminal equipment and electronics necessary to provide dataports for the video and data applications described above, at no cost to the City and in addition to the dark fiber connections.

3. I-Net Ownership, Operation, Maintenance and Repair,

In addition, the model incorporates an I-Net which:

• is owned, operated and maintained by TCI, but the City reserves the right to arrange, at its discretion, for maintenance of the I-Net at TCI• expense, if TCI fails to maintain it in accordance with the reliability standards specified in a renewal franchise agreement. The City reserves the right to retain an independent engineer to periodically evaluate the condition and performance of the I-Net at TCI• expense;

• must be repaired (and/or replaced with new fiber-optic plant) in the event of damage or failure. TCI must respond to such damage or failure within two hours of notification and complete repairs within 12 hours of notification;

• The City shall have exclusive use of the entire capacity of the integrated institutional network;

• The City shall have authority to resolve any disputes regarding allocation of I-Net capacity.

F. HOW THE MODEL MEETS THE CITY'S NEEDS AND INTERESTS

Sharing of databases, files, and other resources, including the City's imaged records and GIS, along with e-mail, would be straightforward over a digital packet-switched network. The model's switched video capabilities would support video conferencing, distance learning, interactive training programs, video arraignment, surveillance and security functions, and traffic monitoring. Internet access could be provided through St. Louis Development Corporation's Internet gateway , which would also provide a means for vendors to carry out or facilitate electronic financial transactions with the City. Moreover, if public kiosks are linked to the I-Net, they would allow citizens to access municipal information from a selected number of sites. Generally speaking, the flexibility and broad capacity of the model I-Net would permit the City to fulfill these needs and interests, and to address further needs and interests that may develop over the coming franchise term.

G. CAPITAL GRANTS FOR ADDITIONAL I-NET FACILITIES

As also noted in the PEG Access section, provision of network elements alone are not enough to facilitate effective use of and I-Net.
While adequate I-Net facilities will increase the efficiency of local government and maximize use of the City's public right-of-way both for itself and commercial occupants, the second important use of an I-Net is to make selected information and transactions available electronically to the City's citizens, regardless of whether they personally own computers or not. Thus, in addition to the specific facilities and equipment outlined above, TCI could provide capital funds for facilities and equipment to be used by citizens in conjunction with the the I-Net as a way to assist the City in satisfying its external government communications needs and interests.

Public Information Kiosks have proved popular in other Missouri communities such as Kansas City, and would enhance citizen ability to easily access pertinent information, data, transaction instructions and requirements. Such kiosks, placed in selective public locations, would allow any citizen access to government information regardless of their economic demographic.

Each kiosk would be connected to the City I-Net. Using only the Parks Department as an example, these kiosks might would permit the public to: (i) register for classes and summer programs; (ii) reserve park facilities; (iii) obtain game times; (iv) locate parks and facilities; (v) learn more about park events and activities; and (vi) view designated City information on the Department Web site. Citizens would be able to interact with other Departments in similar fashion.

Thus, if this report is adopted, TCI proposals should address its willingness to:

- provide funding to install and connect public kiosks at up to 5 selected public locations on the institutional network(assuming space can be made available) including City Hall, the Water Division on South Kingshighway, and 3 other locations to be specified. Approximate cost of each kiosk is estimated at about $12,000, but may be less depending on configuration

VII. SUPPORT OF LOCAL MINORITIES, WOMEN, TRAINING and ECONOMIC DEVELOPMENT

The City is a demographically and economically diverse collection of residents and businesses. The long-term stability of the City is dependent on a healthy economic life for itself and all its citizens. Jobs, low unemployment rates, a trained and skilled workforce, viability of neighborhood and regional businesses, sales, earning and corporte taxes generated in the City, and economic diversity are of vital concern to the City's elected officials.

A. BACKGROUND ON CURRENT REQUIREMENTS

The current franchise (Ordinance 59197 Section Eighteen) requires specified percentages of system expenditures be placed with minorities and women:

40% and 10% (respectively) for professional and technical service contracts

40% and 10% (respectively) for construction contracts

30% and 5% (respectively) for materials and supplies purchases

The franchise ordinance also requires that the franchisee select at least 45% of its construction employees from minority groups and hire 10% of its construction employees from women business enterprises.

Section Nineteen of Ordinance 59197 and Section Six.8 of Transfer Ordinance 61093 stipulate requirements for hiring practices as well as training and internship programs.

Further, in regards to expenditures and training programs, the Franchisee is required to contract with a non-governmental entity (the ?monitor?) to provide consultation to the Franchisee and compliance reports/audits to the Franchise Agency on a semi-annual basis.
Benefits to the City from these requirements have included a diverse cable workforce (including management personnel), video training opportunities, and expenditures placed locally with minority and women-owned business enterprises.

Since the inception of the franchise, various lawsuits which have occurred in the interim may hamper the City?s ability to continue to demand absolute percentage set-asides without concluding extensive studies previously begun by the St. Louis Development Corporation.

B. ECONOMIC SUPPORT OF MINORITIES AND WOMEN

1. Future Needs and Interests

It is in the City?s interest that operator(s) enjoying substantial benefits from use of the City?s right-of-way, and holding franchise(s) for provision of cable tv service to the City?s diverse population, also commit to dispersing its expenditures as diversely as it receives it revenues. Such spending patterns may assist the City fostering support and retention of small local businesses.

a) System Purchases from Vendors It is understood that cable operators make certain mass national purchases from national vendors (converters, electronics and cabling, billing and data services, etc) to achieve national uniformity. Yet the local system still has discretionary latitude for many of the items or services it purchases. System upgrades, truck fleets, newspaper advertising, miscellaneous purchases, office furniture/supplies, and other expenditures by the City?s cable operator provide opportunities to spend some of those vendor

dollars locally and diversely to help support the city's economic life and business community.

b) Contracted Services Contracts issued by TCI for design or construction of the system plant, subcriber installations, multiple dwelling unit wiring, local programming operations, the hired professional services of architects, accountants or other licensed entities, direct mail or survey services, and the like all provide opportunities for TCI to support a variety of local businesses.

c) Verification Agreement that the goals described herein should continue to be backed up by reporting mechanisms which accurately measure and describe successes, failures, availability of contractors and vendors, or problems regarding such expenditures. To be meaningful, such reports to the Agency should occur at least semi-annually and be verified/submitted by an Independent monitor with access to all pertinent books and records. Furthermore, should the Agency question any of these semi-annual reports, financial and other information supporting the expenditures must be made available to the Agency upon request for further compliance verification.

2. Model for Support of Women & Minority Business

Therefore, if this Report is adopted, TCI should agree to:

- acknowledge the Franchise Entity's policy of fully utilizing the skills of minority business enterprises (MBE) and women-business enterprises (WBE) in all sectors of the economy best serve the City's need for economic growth and business development.

- acknowledge that the following goal has been established to encourage TCI to meet the needs of the City and endeavor to meet these goals:

40% MBE and 10% WBE participation in all professional/technical services and all installation/construction contracts

40% MBE and 10% WBE participation in all local vendor purchases (by way of example - but not limited to - office supplies and furniture, vehicles, equipment, automotive repair services, fuel and parts, and other similar discretionary puchases)

• independent measurement and verification of compliance with established goals and objectives for minority and women participation through use of a third party monitor to provide semi-annual reports to the City on spending patterns that address these needs.

• Terms, conditions and specifications included in the franchise agreement to avoid future disputes over applicable categories of expenditures or types of services qualified for inclusion or exclusion.

Further, in regards to local, state and federal equal opportunity laws:

• Operator shall comply with any future participation percentages established by ordinance.

• all rules regarding Equal Employment Opportunity issued by the Federal Communications Commission are applicable to the Operator, and copies of all reports or filings required by the FCC must be provided to the Franchise Agency on the same day such reports are completed for the FCC, whether filing with the FCC is required or not.

C. TRAINING AND EMPLOYMENT OPPORTUNITIES

1. Needs and Interests

Training opportunities and internships can provide valuable support in upgrading and enhancing the skills of city citizens and attractiveness of the local workforce, vis-a-vis high tech employment.

Hundreds of local residents have benefitted from the video training opportunities afforded by TCI's funding of public/community access their associated training programs and internships, which has contributed new skilled members to a highly specialized and often unionized workforce employed in the large and active St. Louis video production and broadcast community.

Hiring and promotion practices by any company strongly affect the development and employment opportunities of the City's workforce. The use of public-rights-of-way for commercial profit signals a special commitment on the part of any cable operator to hire, train and promote minorities and women to expand both diversity and opportunity within and exploding industry. Indeed the industry itself has recognized its obligations in this regard through its

support of annual fund-raising for the activities the national Kaitz Foundation, which promotes inclusion and advancement opportunities for minorities and women in the cable industry.

2. Model for Training and Employment - Women / Minorities

As a major corporate presence and user of valuable public property for private commercial purposes, TCI should be expected to offer proposals, commitments or goals that address the needs stated above.

Therefore, if this Report is adopted, any renewal proposal from TCI should include commitments and specific proposals to :

• reflect the demographic diversity of the city's resident population in its employee staffing and hiring - including management level positions;

• make available entry level on-the-job training and internships to city residents who have demonstrated reasonable qualifications and wish to enter the cable tv, telecommunications and video production fields;
• provide on-the-job training for entry level newly-hired employees and and on-going training for current employees, with special emphasis on skills development for minorities and women seeking promotion to management-level positions.

• provide facilities for the training described above at a central and convenient location in the City of St. Louis for TCI's technicians and customer service representatives, and other employees, and continue video production training in the City of St. Louis' Public Access facility;

• provide a written plan for compliance and correction of non-compliance, including specfic policies for hiring and training; and

• provide independent measurement and verification of compliance with established goals and objectives for minority and women participation through contract with a third party monitor and semi-annual reports to the Agency on hiring patterns and training programs.

VIII. CABLE PROGRAMMING AND OTHER SERVICES

A. SUBSCRIBER VIDEO CHOICES AND SELECTION

1. Needs and Interests

City subscribers have repeatedly stated that they would prefer a broader selection of options or packages tailored to their viewing habits. Comments from public hearings and surveys indicates that subscribers are interested in a la carte selections paid for on an individual or grouped channel basis, i.e. sports or children or news channel packages.

Many object to buying the digital tier so that they may continue to order pay-per-view movies which were previously available on an analog tier basis. Others object to the most desirable new programming (such as sports channels) being offered only on the digital tier at substantial extra cost. Based on comments and complaints received by the Agency, some subscribers (especially those on low and fixed incomes) are concerned about now having to rent digital converter boxes and subscribe to additional digital service tiers to receive certain services(such as Pay-per-View events or movies) previously available via analog equipment.

Therefore, desires for additional choices and new services are balanced by concerns about future availability and affordability of services. TV is important to low-inome and fixed-income families in St. Louis. A number of subscribers have told the Agency that monthly cable television payments often represent a significant percentage of their monthly budget, or their sole expenditure of entertainment dollars. In addition, television is often the only comprehensive information source available to citizens of limited means, who depend on television for news and information.

While changing technologies may induce the Operator to attempt to collect additional fees for rental of equipment such as digital converters boxes, or move programming to an all-digital platform, these citizens may find in difficult to pay more to continue receiving services they currently have on cable-ready tv sets without the use of any converters. It is important for the City to ensure that a digital divide does not deprive such citizens of a key information source.

The City has also identified a need for all subscribers to have access to the system s electronic program guide, which identifies the times and channel locations of all programming offered on the system. Currently this guide is carried on the Cable Programming Services Tier, and is therefore unavailable to over 2,000 subscribers in the City who only subscribe to the Basic Service Tier (channels 2 through 28).

2. Model for Meeting the Need for Programming Options

The City will not dictate particular programming selection or channel use in this RFRP. While the City can request details of the Operator's programming services for informational purposes, this Staff report does not suggest that the formal proposal will be evaluated on that basis. Exceptions previously noted include federally-authorized local requirements or mandates for provision of public, educational and governmental access channels, federal requirements for leased access channel capacity on the system, and local origination or other broad categories of programming the Operator may choose to offer as an inducement for renewal.

The City will not dictate or prohibit the use of any particular navigation device. On the contrary, the system facilities and equipment should not unneccessarily foreclose any options in this area that might be selected by the Operator, and to the extent possible, should be compatible with such options as may be developed in the future.

Three different models are suggested as possible ways to deal with the issue of affordability and availability

1. Operator may commit to significant low/fixed- income discounts.
2. Operator may ensure that basic cable service (BST and CPST) will remain accessible via cable -ready tv sets without additional costs.

3. Operator may provide a mechanism by which groups of fixed-income or low-income residents may obtain cable service on a bulk-rate basis and thus avoid increased costs for basic service associated with new equipment required to receive such service.

Any model that pupports to meet the needs and interests of subscribers

- should specify the amount of channel capacity to be devoted to leased access to comply with federal law, indicating if possible on what tier such channel will be placed

- may provide information on current offerings and describe in detail plans for future programming quality and mix, tier placement, buy-through provisions new services, including specifically timetables for availability of such services, and explanations of how such services would be made available to subscribers, technical limitations or other conditions which would affect availability.

- should explain specifically how Operator would minimize (or aggravate) the exclusion of low-income citizens from access to electronic information based on information provided above.

- may propose other alternatives to those described above, showing how such other alternatives address the issue as effectively as the model approaches noted here.

B. OTHER CABLE INTERACTIVE SERVICES

1. Needs and Interests

Public hearing documents and survey responses indicate there may be substantial interest in other non-video services delivered over cable system: Internet services scored high, telephony somewhat lower.

The Agency's Telephone Contact Inc. survey of September 1999 indicated that 36% of respondents were somewhat to extremely interested in high-speed Internet access.The survey did not question interest in cable telephony.

While both hearing and telephone survey input reflects a certain hesitancy to conduct financial transactions with City Hall over the Internet (for example, paying tax bills), many of those surveyed (33% telephone) indicated that accessing City Hall information via computer was very important to somewhat important.

2. Model for Meeting Interests in Other Cable Services.

If this Report is adopted, TCI should be expected to delineate:

- proposals that any upgraded cable system would be designed to be technically capable of providing a platform for multiple non-affiliated Internet Service Providers;

- timetables for deployment of an upgraded cable plant throughout the entire City, capable of offering broadband Internet services, whether such services are actually deployed or not;

- its willingness to comply with all applicable ordinances relating to Title VI non-video services; and

- any legal or corporate impediments to opening any proposed cable modem platform to non-affiliated third party Internet Service Providers.

IX OTHER FRANCHISE TERMS AND REGULATORY CONDITIONS

Legislative History				
1ST READING	**REF TO COMM**	**COMMITTEE**	**COMM SUB**	**COMM AMEND**
03/03/00	**03/03/00**	**PU**		
2ND READING	**FLOOR AMEND**	**FLOOR SUB**	**PERFECTN**	**PASSAGE**
03/10/00			**03/17/00**	**03/24/00**
ORDINANCE	**VETOED**		**VETO OVR**	
64882				